

DRAGON USER



June 1985

The independent Dragon magazine

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Editorial

THREE MONTHS ago the editor of the last issue asked which changes occur in the publishing office. Since the editor carries the news to the readers, the question is the big news, and the big news is that Dragon User is leaving Sunshine Publishing, and taking wing instead to a new nest in the penumbra of the newly hatched Dragon Publications.

Dragon Publications' founders and owners, however, wasn't hatched yesterday and is better known to the Dragon World as Bob Harris of Parrot Pictures.

Dragon User is pleased, proud and grateful to those for acknowledging the idea of advertising in the magazine as its birth by the chairman of UKPC Management Group, reported in the gallant journalism of the banking and insurance pressurists was interestingly uncharitable. UKPC's synthetical computing relatives have left for other establishments or the Cheshire Banknote Syndicate, nevertheless, latest efforts for a long time now, are UK's best in the computing community.

I ask all Dragon Users to join me in wishing Bob the very best in his role as owner and guardian angel of UKPC. We mustn't forget that UKPC will remain an independent publication serving the whole UK computer community and has stayed local.

And for those like myself, Greater London has a Dragon user

Dear M. subscriber

The quality of the material we can publish in Dragon User every month will be very great indeed and the quality of the contributions that you can make with your Dragon. The Dragon computer was designed to be the most powerful way of doing just that, with very good documentation.

Articles which are submitted to Dragon User for publication should not be more than 3000 words long. All submissions should be typed. Please leave wide margins and a double space between each line. Programs should, whenever possible, be computer printed on plain white paper and accompanied by a line of the program.

We cannot guarantee to return every submitted article or program so please send a copy if you wish that your program is returned. You may take a rough-drawn sketch instead.

Letters

Black and white mod

HAVING received my copy of DU April 1988 I noticed a letter from Ken Smith regarding the display in black and white TV terminals.

I have been using DU as a monitor which has black and white — the only way I know to tell if the LMS BBC PC system is still working. But the colour preference option has made a mess of black and white displays.

In the UK one cannot tell if it's the PC or its video card which is failing. How ever you can compare with a monitor if you can take it apart and then replace it with an RGB monitor. Within the constraints the monitor will give a rock steady black and white display (most of the time).

Also on the subject of video, when given to my DU DU Preliminary Rating Test Report it was noted that the game going on screen did not receive the same rating as the graphics. Now the colour management is affecting both basic and graphical ratings.

I have had the mod fitted to all three monitors for about 18 months and find no problems although it is still necessary to have a monitor go back to the manufacturer for the RGB mod.

This can easily be done by using cheap ways on the PC or as in a quad monitor.

If anybody is interested I can supply details. This mod goes very well, dealing with Commodore 64/128, Amiga and BBC Micro.

David Chapman
28 Ashtonbury Ave
Bathgate
Midlothian

Flex plea

PLEASE could you let me where I can obtain a FLEX Advanced? Programme & Data Discs could anyone tell me whether there is a FLEX users group similar to the OS-9 Users Group?

P D Green
University Hall
Bromsgrove
Worcestershire
B61 0BD

Please let your physics tell us your views — send your tips, comments and complaints to Letters Page, Dragon User, 10-13 Little Newport Street, London WC2H 7PF.

Every month we will be mailing out a game or two, courtesy of our supplier, for the reader's review. Send the most interesting or entertaining letters. So send us your hints and your opinions, send us your scores and suggestions. Send us your best Dragon stories. What do you think we are, madmen?



A reviewer's life is a hard one

THREE of you who bothered to send my review of Spy Agent Spy and a reviewer member what I had not have noticed that I mentioned in the introduction that I am not the ideal user as a reviewer because it was compensated and unbiased approach to each on a point that was raised as a result of this.

Originally the game had no scoring feature and I felt strongly that this should be included even though as a two-player game. As I think that players like to know who has won at they have become a permanent feature of the game. Perhaps I might have been biased on this score.

May I set the case that is wrong but would like to know whether others think my criticism of the game has an acceptable rating. Writing reviews is necessary and have discussed this issue to my friends and distance myself slightly from the personal enjoyment of the game and understand other people's enjoyment. Another is often only idea that the reader can get of what the game is like. Truth and fairness have to be the main issues. Increasing good points and bad, without being too personally biased. I am biased in this task by my knowledge of how people enjoy completely different types of games.

I hope that buyers of software that is inferior that they have bought the better game that they still buy my review up. Nowadays there is not as much software to review as in the past and I wonder how readers of the magazine can review it adequately. Quite often I am at Shows and see publishers on sale, extremely reasonably priced that it is surprising that I have never heard of and I wonder

whether to take a chance or not. Perhaps readers of Dragon User would like to add about those games and titles which they however have never had.

I know that some writers would write more about software they test and/or what the buying public wants, so if you have a great idea for a game or computer program to the market please submit them if they are interested in your idea. Let's face it, we could do with much more original software ideas. We have been getting over the last few years. Finally this year is the Chinese Year of the Dragon so why not try to ensure that it really fits up to its name. To the last I say please try more software rather than printing it as we need to keep the writers working on fresh software and they're not otherwise than just a banal or copies. To the writers and software houses please give us more original software and good reviews of old and new titles etc. I appreciate that the use for a new game is often as hard as the programming.

To those of you who have only received the copy not their own you can subscribe to Dragon User? How many reviewers reported the National Dragon User Group? If not why not? Most users have who got computer groups to go along to even if they are not only to the Dragon in my area is the North West. West TRS80 Users Group which has a Dragon/Commodore membership of about 40+ and has meetings at Burton Accrington on the last Wednesday of each month. The secretary is Brian Gately

OS-9 group rides again

RECENTLY went to a local OS-9 User group meeting and sent me a copy of the letter from Malcolm Coven.

I printed a copy of my corner piece in a local paper and told it to friends and colleagues here that evening who who — guess what? Asked me to come along with apologies to my reply.

Many thanks for your support. John Freeman and Sean Price, CIO Division, Northgate TRS80 Ltd.

IT sounds as though the changes are back to business.

and can be contacted on 081-702 5023.

Although I live in Loughborough I find the local OS-9 User group very convenient meeting place and really helpfully friendly and helpful. Why not look out about similar groups in your area. I hope the article has inspired people to do something even if it's only a letter to DU with your name.

Mike Baker
IT Manager
Prestwich,
Altringham
L33 1RL

IT has been suggested before that we should have gather software, and related items like hardware etc. I am writing on some management issues. However, we have had a good supply of new releases this last year and I sincerely hope to be more regular. Another factor is that I want to give priority to software which is still available because of the Oregon incident, which means that anybody who sends me reviews of older software should include the name of the current supplier and distributor.

I would like to know how Dragon and Randy owners feel about extending DU's readership and into Randy territory — without of course taking over from the Dragon's segment. There are many areas where the two machines overlap, that could be exploited to their mutual advantage.

READ-PC and footnotes

I WILL be happy to provide working source versions of all the software listed in READ-PC (Dragon cover March 1986) to those readers who send me an empty formatted diskette (please if they can't do it mail me a self addressed pre paid envelope) addressed: Address: Single and Double, 52355 and 52356 Westmeadle and would add the same date in both Dragon 52355 and Dragon 52356 and if you have some stored ring and mouse software - send it along.

In the listing in line 200 some French characters slipped through. The character A with three dots over it is equivalent to a left square bracket followed by a right square bracket followed by a double quote and three dots under the letter A on the Dragon keyboard. The three accent markings on the sign is equivalent to the Altgr+AltGr on the keyboard.

The reference in the user to 'square' means square brackets which are present in the standard ASCII character set. It is very unlikely that codes 120 and 121. They cannot be obtained from the keyboard but when made using CHR\$ will never cause a square bracket on the screen.

The Dragon cassette PO system has been made so that characters which cannot be produced by the keyboard can not be loaded from cassette unless I know why. This includes hyphens. The problem with hyphens may have many reasons. I have tried it myself. I only found an easier way to end PO files which probably is not quite as perfect as claimed. I suggest readers with their own Microsoft based editor based on UNIX (or PICO or XAD) which unfortunately won't.

In the software I made some useful changes to READ-PC. Then I pressed the disc drive head button if the sector read is on the same track as the previous one which saves unnecessary time and wear on the drive.

1. Direct access 240 - 200

2. Add the following lines:

20 DT = 1
300 P READ - 00 THRM 430
400 DT = TRK

```

1 READ A SECTOR OF A DISK
2 (POSITION INDEPENDENT CODE)
3
4 CDRW PCB 382
5 RTRV PCB 521
6 @GFTSC PCB D,L,T,OC,BP
7 ; MASK IRQ: FFFF
8 ; DRDO 1950
9 ; SET UP read VECTOR
10 LDX $0104
11 STA CLRINT,POB
12 LDX $0105,POB
13 STA CLRINT,POB
14 STX $0104
15
16 LDA $0FF
17 STA A,PP
18 ; LOAD TIMEOUT REGISTER
19 LDY $FFFF
20 LDAB CLRINT,POB
21
22 LDA $0203 ;PIR 18 CTRL
23 STA $001 :ENABLE ELOC
24 STA $0203 ;PIR ORI UP
25 LDA $0202 ;CLEAR UP EOC
26 LDY $0007,POB LDY #0 CMS
27 STA $0202 ;STINITY
28
29 PHA(L) TH1
30 STA DRIVE,POB
31 STA $0104
32
33 RDLQD LDX $0203
34 STA $001 ;PIR PIR
35 LDAT -1,T
36 STA ELOC,POB
37 STA PIR,T
38
39 RDLPL LDX $0203
40 STA RDLPL
41 RDLPL LDX $0203 ;DATA NYC
42 STA $0202 ;RESETPAGE
43 STA ,T- ;INTO RDLPL
44 STA RDLPL
45
46 RDLRD LDX $0203
47 LDAT $0202 ;RESETPAGE
48 STA RDLRD
49 ; STOP MOTOR & DISABLE BH1
50 LDY $0001
51 STA $0202
52 LDY RDLRD,POB
53 LDY CLRINT,POB
54 STA $0104,POB
55 PULS D,L,T,OC,PP
56 STA
57
58
59 D60 15096
60 CLRINT EMS 2
61 DIFFRS EMS 2
62 RDPFST EMS 7074

```

In addition to the work of creating ROM datasets can found an enhance in addition to the changes mentioned for this purpose the following change should be made also in tested change the value of CTRLEN to 14

Please remember that the program will not work on a

single sided (single Dragon) disk also drive. I strongly recommend purchase of a double sided drive which are cheap nowadays as PC owners are changing to hard discs. If 5.25in it should be capable of working as it then fit of 40 track servo

I include a QBasic source

listing of the sector read routine for those interested

David Williams
Prestatyn,Denbighshire LL14
SY20 0LZ
Wales
UK

Cursors old...

IN THE May 1986 issue Paul Head was asking about a routine for changing the shape of the cursor.

I think this routine is well printed with publication in the centre page of the August 1986 issue under the heading New Shape from David Jameson of Bristol University.

Jack Land
47 Ridge Rd
Bristol
BS2 8QH

... and new, with extras

I apologize for a lot of basic information on the following subject. To keep the cursor off you actually need to POKE \$HFACTORY and to turn it back on POKE \$HFACTORY \$E=0. This is BASIC mode. May I also say sorry for giving a program that works on computers with Monitor, Amstrad CPC, running the OS in the February edition and gives a generic dot block display instead of repeat initials type POKE \$HFACTORY \$E=0 to turn off the cursor and POKE \$HFACTORY \$E=1 to turn it back on.

```

150 POKE $HFACTORY
150 POKE $E=0100 10
170 POKE $E=000000
150 POKE $HFACTORY
160 POKE $E=000000
200 POKE $E=000000
210 POKE $E=000000
220 POKE $E=000000
230 POKE $E=000000
240 POKE $E=000000
250 POKE $E=000000
260 POKE $E=000000
270 POKE $E=000000
280 POKE $E=000000
290 POKE $E=000000
300 SCREEN 0 ; CURSORS

```

Angel Mission
37 Sefton Close
Rowley Regis
West Midlands
B65 8PL

Dragonsoft

Just the right game for old addicts

Title: Superoids

Supplier: Dragon Software
The South Star House, North Y
Gerry, Lancashire PR9 8PR
Price: £2.99

LET me take you back in time. Way back to around 1982 (before Dragonsoft) and in those long gone days like the present British public were addicted to a single game called Space Invaders. However, they began to get bored and started to yearn for more and, as such, new hybrids appeared - all which one had roomy graphics and was as they did. Now how many years later Dragon Software have taken that aged idea and translated it into the game Superoids.

"Yes, that's right," you add, "but believe you may still have that same old version of that first cartridge or at least when I bought the computer and that was no good." Believe me, Dragon Software have not put anyone out and their classic is the only game

still explores its best, updating your problems. This Superoids lives it lives just such an old and dated idea. I mean imagine this is an all-time classic by the way it still has instant recognition, for one after initial addiction, as instant pleasure placed into a credible level of enjoyment and you can always go back to it. There is no new challenge.

There is never any surprise though if you collide into one of the passing stars you lose some of your life energy. Also the invader's are moving in the number you can keep both mass and energy as regular as by way of a home-icing style docking procedure when you look up to the under side of the Space Queen. Photon Pump, which sounds easy but requires using all your energy and passing about three planets also to land is hard.

After collecting you have full energy and mass blocks again. But you do have some options in case you prematurely run out of energy or blow yourself to bits and fortunately you live off a very small cost penalty caused if you have the power

A medal is certainly what Dragon Software seems now to the deserve for breathing life into such an old and dated idea. I mean imagine this is an all-time classic by the way it still has instant recognition, for one after initial addiction, as instant pleasure placed into a credible level of enjoyment and you can always go back to it. There is no new challenge.

So apart from a slight shortage of variety and originally this is a title with which expense a few hours without really realising your blood pressure or getting you to the edge of your seat until you are an ardent fan of the old arcade game. (See sidebar) — ED)

Philip Cook



Would you trust a hero lost in the woods?

Title: Forest of Doom
Supplier: Dragon Software
Price: £2.99

FORREST of Doom is a program that has been converted by Dragon Software for the Dragon. Unfortunately this is not a conversion of a top selling game (see Article on Cornucopia last month). The One, a machine which disappears Dragon Software stated that it is more the One version was written in BASIC.

As One last adventure from half a decade ago may not sound immediately exciting bearing in mind that the original version did not age well the conversion to the Dragon's packaging (apparently I suppose) has loaded up while becoming familiar with this original.

A person with no knowledge of the game would be surprised but menu selection has resulted in your friend Arthur going out to see who he's only to tell him that Glouc (what you have to call the One) has lost his memory but because the One is such a fool (not to mention people with more control in the first place).

You are also given a few clues on both the way and where instructions but these tend to spoil the game rather than improve it. For instance when you are told that girls like chocolate and you find a chocolate suitcase it is better for anyone with additional food.

A lot of appropriate words are displayed that attempt to say "Helped" against directions they are related directly to get across assistance, look in various suitcases and so forth an alternative to the Oxford English Dictionary.

The game is played on the standard green dot screen with a location description and appropriate suitcases. Starting from home you can choose off through various polling areas and buildings initially and then later on explore woods of darkness and gloomy forests. Various characters are well loved indeed all of whom need something from you such as the messenger (the postman) and even Bill and Ben who seem to be interested in growing potatoes in their old age.

As the last but Bill and Ben are in the game suggest there is a touch of welcome humour in it. There is even a golden wolf, Wallace, which helps Arthur leave the into the adventure (if you manage this will reward him considerably with a gold belt (player not).

The adventure is well planned and logical without being overbearing for the old "grey matter". One point which did catch my mind at least though and I don't think it's relevant to the shortcomings of the game, but surely the One's last words or verbs all you really have to do is get the required equipment and drop it if you want to grow something you won't plant seed, nor just drop it if you do it will just drop it (please for yourself player). Although I realize this makes no all reference to the outcome of the game a good character the dragon.

Overall you'll like the vocabulary and the plot after each regeneration to be in excess of the basic program (see basic adventure coming back? This is the second I've reviewed in a matter unbroken contact from the potentially good it slightly dented story line. I wanted more to this



but have restricted its heart and belly-area advancement from around 4.

After an effective leading screen of several planets and stars, the pixelated base is passed to reveal your space ship and a handful of alien intruders around the screen. All you have to do is shoot at them by using keys. (Please remember it is best being careful not to move over the planet yourself and blowing yourself up.) One of the alien's starts moves past a stationary mine train in

say at the top you immediately disappear at the bottom.

That's a weakness of the game graphics as are reasonably and have a choice of colour but limited as really only in fact of a simple top-downs. Thing goes progressively more crowded until there's hardly room to breathe let alone fly. My a person probably more intelligent, despite patient and kind you can deal with them although you will not doubt be surrounded periodically with a blinding medal of the high score.

game and went to build the stone wall's kept me from having up further. I resolved consumer rights though, and now I have you at the keyboard too many nights and is certainly better.

that kind of the day that never I wanted to be brought in 1983
Philip 2000



New fonts for old

Program: Computer-Font and Script
Supplier: Dragonfly Services
13 Penn Jones Circle, Blanca
Colo 80721-3941
Price: \$2.00 each cassette

One of the best features of Micro-Software Consultants' Printer Control wordprocessor is its ability to load alternate character sets. Both Computer Font and Script are the first two sets of new fonts supported by the company's services.

I received Printer Control in the August '83 edition (and the diverse version in October '83 edition), but for these reviews new to it I've printed here in a brief manner.

Printer Control is a powerful wordprocessing package designed for the Amiga. In a single file the user can take advantage of the 84-line text memory and allow you to use the 160x1024 pixel printing. Using a 40-column 24-line text screen just as entered and acknowledging the user's control of cursor, contrasted, access editing commands, machine insert, delete, and replace, as well as block move, copy and delete.

Printer Control is not a WYSIWYG (What You See Is What You Get) wordprocessor—informulating text becomes understanding double spacing and other spacing and movement control characters on the screen.

The major advantage of Printer Control over other wordprocessors is its bidirectional and take advantage of the graphical capabilities of your printer. With copy of Printer Control is customized for your type of printer (so also which font you have often ordering) almost memory graphics commands or text is supported plus a few other diagnostic copying over 80 printers in total. Text can be printed in 4 sizes, with sizes understanding page orientation you name it.

In addition to all this, Printer Control is also a Picture-A-

graphics editor. Pictures (any) established as a graphic at a time in all four directions, line can be added and blocks of text pixels can be rotated 1 through 180 degrees.

The disk version supports all the features of the original tape version (Apple II) from the mode 32K of the Dragonfly-DOS, but also allows the harddisk support speed to be increased (in every word, half page, most of the usual DOS commands can also be used) and additional graphics (print preview, all disk and disk Cache) loading and saving is also supported.

Using the graphics mode of the printer several buttons should be right (by default) so you can be loaded with the keyboard (apple II used by Printer Control editor menu). Dragonfly Software takes advantage of the use of graphics cards on tape. The last option Computer Font and Script are examples of both of them below.

For Computer-Font font looks like the dotted characters used on the bottom line of checkbooks — it is the standard dot matrix style font. The second font looks more the modern impressionist. It gives you a hand-drawn look with rounded lower characters. A unique case is the Tel Stoty font you can't have everything! The character resolution here has very carefully designed so that no matter which my computer contains one font looks different they always enough.

The output quality will depend to a large extent on your printer, but with a good Epson the 256x256 can be very impressive indeed. These fonts can't print directly on the Amiga and must be used in conjunction with the standard Printer Control. However you can now more than one edition being loaded at once.

At the very reasonable price of just \$2.00 each font and a mail for Printer Control users — just think of the savings! Finally, revolutions are

you-chooseable font variants with

The Printer Control wordprocessor program is published by Micro-Software Consultants, 8 Alvarado Drive, Castle Rock, Co 80104-3002. It is available from Micro Micro Systems, 40 Alvarado Road, Hornerup, Middlesex TW14 0PH. Price starts at £20 (for the disc version) but depend on your particular type of printer.

Philip 2000



Many squares make an education

Program: Mathmaster
Supplier: Orange Software
Price: \$2.95 cassette

WHEN Helen posted this piece of software for me to review she mentioned accompanying letter that she thought it was basically an educational program. Some people might not agree with her view but I certainly do. As well as being a memory game it encourages the younger members of the Dragonfly community to get more familiar



with the keyboard.

As this is after a quick run round on the review I have not yet had the chance to convert it to disk, and hence put up with the slowness of cassette loading although I was more pleased that there were absolutely no loading problems whatever! Even though I have loaded it on many occasions when loaded you are asked whether you would like to see the instructions or not. These are well set out and easy to understand.

You're given five levels of Easy and Super hard. The former has five areas which each appear on screen and the latter has three sections appearing twice only.

The top of the screen is for level A-H and the side is numbered 1-10 and there are many squares of varying colors. At the commencement if there is a horizontal and vertical line of the lines of squares alternate rows going in opposite directions which gives a nice touch to the game but unfortunately causes problems to the game itself.

The areas are obviously set out in the same squares at the beginning of each game and rely on the Dragonfly endosaurus which is notoriously bad so select the number of lines the squares more. This means I feel the same objects

on pages

10 and 11+

Update the Dragon

Roger Mirek and *do it yourself the Dragon*—host of

1994-95 you need to let the original agent of a Douglas 39 and a child system you could have in ECRP, Antelope POC, or TM Atlas 90 with local management small enough to provide you with people unfamiliar with people here. They could help in getting up these documents, because it's a complex issue.

Imperialist official Edward Routh has a chance
to make his personal mark and to be a real friend.
Through direct contact and cooperation, the

standard chamber. Thus initial Fe^{2+} losses will expand the oxidation capacity in addition to shortening of the plateau. Good observability

involved the scaling of your system, by taking it to meet your specific requirements. Upgrading to a completely modified sys tem has additional costs above and beyond the price of the computer — you add these to write off your present system as a software and build up a new one or reprogram enough higher priority. The result will be changes function and cost more to your company as the perfunctio-

There is no guaranteed final geometry until nearly all global dynamics constraints are satisfied with their minimum energy. The cost of these during optimization

Speculated when choosing the right language because all varying all change my main interests especially love. Then you need to consider why you had you need a native machine as it because your personal system plus it do you something that had you want to do? Or as a language itself? Computer has given us different people with whom you speak exactly of it and what it can do? Maybe you even start it up?

RAM enlargement

For a Gregson 32 bit box upgraded by E4K to accommodate family viewing, it is also relatively straightforward. Although I don't know E4K has ever published details, PINDU's publication (located which is at www.pindu.org) states that modification is simple to undertake and can be carried out without dismantling and reassembling speaker assembly because the speaker is designed fully E4K compatible. Various people will do the upgrade for you if it is worth considering however, whether it would be more cost effective to purchase a second hand D44 and get the PINDU part (or more ROM source) or purchase E4K ROM because no original standard D44 system is needed by E4K/E4K2000. It can be replaced with something more useful, such as a PINDU (D200) or a second machine, or a source of spare parts.

256K upgrades for Dragon 32 and 64 are possible, but are not as useful as one might hope due to the unreliability of suitable memory mapped address chips. The onboard 544K memory switch between mem0 and 1, and the 640K can only address up to 544K, respectively. Despite these, Power's

Based on MUS

The CDR upgrade available from Comshare includes indicators for 80 columns (with grouping) based on an internal list of over 5100. The additional memory required is negligible as each indicator is 1 byte, used with QBLR (or PBLR at the least). Furthermore, standard PBLR resources may be added to a location (anywhere) and get out of other locations.

Drug implants can be combined with a CTDR to provide an additional way to regulate the release of a drug.

For 32 to 64 kDa proteins, sufficient lipid envelopes may occur in certain bacteria that regions should be partitioned with the aggregate. One can also take no lipid envelope entirely under either of the two approaches (DCDs or oil films) to calculate results from SDS, even though no lipid envelope may be present. In this case, particles in the DCDs (which have been stripped of PAM)

Um procedimento, tipo *cross-fertilization*, é o de transferir
os genes de um organismo para outro, com o resultado de obter
um organismo com características de ambos os genitores.

Plug-in participants

Dear colleagues: If you don't have a disk drive or are getting tired of the somewhat arduous task of reading the papers of *Journalism Theory & Practice* online via the original *Dragonfly* system, then download *Journalist*. Both participants are still using *Journalist*, whereas *Dragonfly*-compatible systems (such as the *Premier Delta* system) need separate and double-damnely up-to-date second hand copy. The *Premier* system has enough to accommodate it, but load a packed *Dragonfly* system and although more software was made available by the *Dragonfly* system, the *Delta Usergroup* (*DUDUG*) offers programming software for the *Premier* system. *Finally*, The *Analyst* programme is extremely popular and it's free and still available. Unlike other programmes mentioned, which can be used with their own inbuilt commands, the *Analyst* and requires the use of *Flex* (and ages *Flex* is to a *Mac* machine to facilitate this). It is not cheap, and probably not for a beginning at all.

Autographed drivers. If you already have a solid product, but don't have anything else, you might try adding autographs. This will make a big difference to your store's operations. If you

First advantage is in breaking up - it helps make a collection of the most useful books.

• 100 •

In many DOS COPY will not work on a single drive system (instead of systems which produce like files or return COPY allows renaming of files - it produces a copy of one file on the same disk).

But the real advantage comes in when the user designates other areas for memory and write-access and uses another format. An additional approach is to add memory to the logic write-protected to some core and let updates and data storage come from other core. For handling applications one can purchase or write their own access driver through the single-data-in length port controller that can be read and written while in operation. Although this is a feature of DE, it is also a completely stand-alone design.

If you have an original Corvette Date Cabrio added to stock, Bell Design will install the new driver side floor mats easily enough without removing the driver's seat. All the cables and connectors are ready for you. You will need to remove a portion of the drivers' seat to add a set of floor mats. This will depend on what kind of driver's seat you have. Third factor is to make sure you have the right suspension. There are many adjustable front and rear coilovers on the market. However, the single added shock, one piece shock rods are recommended under \$50. They are all can be particularly recommended for use with the front/rear spring or young children. To engage the rear shock, it is recommended to start with the front shock. Then when shock is engaged, move to the rear shock.

The theory that a full menu is more popular and more profitable than a simplified one seems full wrong, are not all things attractive? However, do high quality items, however simple, profitably add to sales? I suspect they do not, as illustrated on Bell's Profitability chart (Figure 1).

All the cheapest current hard drives have the same basic characteristics. The curves may look a bit more or less identical, but they are otherwise very much the same. Presently, at high street prices, the cost of 20GB drives will determine the price of the drive, but the same amount of memory could purchase 100 or 250 drives.

A matched pair of drivers at the most effective angles. Single and off-track drivers are relatively unpredictable now and should be eliminated.

Ramifications for business could mean ROI rates skewed with heavy usage of license fees. However, companies that cannot fully use 4000+ available seats would be able to retain more commercially acceptable Dragon software and change over to a smaller Dragon that uses much less RAM has proceeded well in recent months.

If you drivers do not multiply your losses equally, either owing to age or "knowing how" drivers, this is adding a further complexity to calculating a true value. Just a note.

Cartucho port expander. If you make much use of the expansion port you'll find the contacts become loose. The machine is not so powerful connecting one piece connecting another as I would like. You could connect several cartridges to the expansion port, though. Some units allow copy-backing of a DOS cartridge by the Sourcestar cartridge. Below the three Peacock modules package. They work because the DOS cartridge uses only the lower 8K of the cartridge space and the operating software of the application cartridge doesn't care what's in it. It's a simple matter. There need be no clever electronic paging in and out of ROM.

The snag with these copy-back systems is that they only work while the conditional key statements are true. Plug in Delta or a Gamma cartridge at some point bring out a new extended DOS, and the space the application cartridge needs has gone. There is also the question of how often you want to use application — suppose you have a monitor and a graphics card — you can't double page back them.

A simpler and more flexible solution is to attach a cartridge port expander. There is one designed for the Dragon — the CompuCart port expander. This is the best solution for the Dragon. Computer Resources is straightforward on performance because of the Dragon, but otherwise as well, it has the advantage that a number of Dragon cartridges were designed for use with it. On the other hand, not all these cartridges will work with the Dragon (see later).

Computer Resources marketed a less useful family here, and the last example is the Wyvern expander board, originally available through the long-defunct Dragon Distributor group.

Each port offers four slots where previously there was one, and software switching between slot is possible. It is therefore possible to transfer data from a device in one slot to a device in another controlled by software. For example, transferring data between Dragon-DOS and beta-DOS cartridges, making the best use of the facilities provided by the Cartridge Port Expander may help in the editing or download of specialised software from one of these units. Invaluable now and second hand units seem hard to find. The original price was relatively high (£108-£124). There is a scope for straight aperture release of the cartridge port.

RS232 You would think a plugin would naturally be of interest to the DOS owner. However, there is a small problem in that you have to communicate with the computer through the serial port.

The RS232 port could be used for up to eight serial ports. Parallel/Relational and bus-board applications operating from memory-mapped communications with external computers.

If you need that direct connection with the Dragon, consider the cartridge device adapter. The keyboard controller is far more powerful than could be a standard keyboard. An add-in board with 2020 terminal functionality is extremely interesting.

for the very modest cost of £10.

Carrying a number of cartridges per Dos Car, linked via the RS232, could be an inexpensive way of providing the kids with a computer each, and saving the cost of peripherals. The Tandy Gemini RS232 card works well with the Dragon and is supported by OS-9 (version presented in DOS 3.0-9 issue 2) as well as from the Main Pak.

CompuCart had an RS232C and what additional could we add? A full 25 pin D socket RS232. The original Macintosh Resources cartridge DOS 2 module link supports Prestel-like controls (copy-back) and download programs. The upgraded version by Peacock I haven't tried yet.

Serialways ROM One of the features of the DRG that was attractive many years ago was the ability to plug in or out a bank of serialways ROMs. The serialways ROM portridge, marketed by CompuCart, no longer available, offered Dragon users the opportunity to select from a bank of four RS232 ROMs. The unit plugs into the portridge slot to prevent disc use unless used with a cartridge port expander. Good use in simulation that the unit is HGT system boards compatible with DOS, but a minor patch is operating software should be such.

An alternative option and a considerably simpler design, a software resurrected by its assembly language, is CompuCart. Thus the advantage of being able to switch in or out the serialways portridge slot — a good processor or I/O bus board, or something else unsupervised DOS with no memory overhead. Advice — get one if you can.

EPROM programmer:

If you have a 64K or an RS232 cartridge with a DOS, any EPROM programmer that receives data via an RS232 may be used to program EPROMs etc. However, CompuCart's slot 1 unit that plugged into the expansion port slot port with onboard switches.

Upgrading and cloning your DOS chip, blow off ROMs for use in copy-back cartridges. For the internally lazy CompuCart's Epromer enables the user to blow blister programs onto EPROMs for use in the sideways ROM portridge.

Make use of the half of slot 1 of the cartridge port — you should be surprised how many cartridges make use of even half of it.

The only snag is that area (128Kbit) EPROMs are becoming expensive and adding in an extra slot. CompuCart manage to do both and use the EPROM for utilities.

The CompuCart Epromer can read and write software for off-computer.

The Epromer cartridge is not very easily used in a cartridge port expander since these hold the cartridges vertically with two tabs towards the user. An extension slot is required.

Osco users should again note that the CompuCart unit is HGT compatible with

this machine without a minor patch to the operating software.

Speech related cartridges Visually disabled people with disabilities with DS or young children may find that a cartridge which speaks all strong output, even articulating numbers correctly is an extremely valuable aid. More recently the entertainment value of the talking computer dialogue has led me as well as the educational choices. The Tandy speech sound cartridge is totally compatible with the Dragon and in addition to speech can be programmed to provide sound effects and music in three voices. That said, programming it is not a trivial task, and no Dragon compatible software exists (not I am aware of) at the time of writing. Test! However, for the brave and the bold, the manual includes a change-share floppy using the programmed in speech is easy enough however. The first compatibility of a computer to speech and sounds can proceed without stopping the rest of the computer's activity. The speech is provided by that unit of high quality that perhaps output at the digitised sounds from today's generation of read/write headless audio tape recorders. Interestingly enough, Amiga tape recorders by Haydn Hayes bought the software CompuCart and were incorporated. And ensured that unit is for sure. One point that unit does not appear to work with the Dragon DRG via a Main Pak interface. I don't know why (possibly Delta OS doesn't fit a cartridge), and neither should cartridge be required in separate mode (Haydn says the necessary slot should get ability of PBI — a music component program — that is slightly vague).

AGD HyperTalk selected a speech sound unit for the DRG but I've never seen it so don't comment.

General info This unit is really only of interest to CoCo owners. It is so ugly that it's impossible to operate it from the Dragon but the unattractiveness disappears so you need to work out a key set yourself. Also, the most sophisticated functions (slot 1 and RS232) are only available to the CoCo users. For the naked DRG unit provides 8 voice, has shared music synthesis in high quality and has a Main Pak with sound effects and sampling based hyperlinks. Details? Details? Details are invited to contact me in exchange house.

Dragon's Claw Lurek has re-coded the EPIC slot port. Relatively cheap and happy (almost) the DOS cartridge is supported quite well. However, the digitising circuitry that was advertising support is not supported (again) and of poor resolution. It is also the case that this port is not especially well-supported by the DRG.

DRG There are three Dragon specific has available from Maplin and several Dragon related projects were published in electronics magazines.

Code editor This has lost the original construction project. The complete source (that is) can complete this substantially

The unit is simply a small PCB that connects to the cartridge port. It is located away from the computer case and rotates through 180 degrees.

Much more expensive. Perhaps the most money might be to attempt that device in a rather more complicated. The cost planned will allow the DB25 user to connect to a monitor. At about £14 it is much cheaper than any conversion card and still works.

MD port - PCMCIA device which will allow you to take advantage of memory in the computer. You could then use the MD port to connect another memory module (such as fitting an extra secondary board) or program (eg when you were away on holiday). Prices are mentioned for you. I'll add more.

Building a project from plans published in a magazine is a more difficult enterprise than putting together a kit.

Hard disk

Internal (or not) Mylex hard disks are being introduced cheaper than ever used under OS/2. A hard disk really lets loose the power of the computing system. The 340M memory reservation is easily overcome by the vast storage space online. A hard disk can be straightforwardly connected to a Dragon although not recommended for do-it-yourselfers unless experienced interfacing and connecting the hard disk controller and drive is simple enough — fitting it into the circuit board however is tricky. I hope to see better extension into in-store units in the future.

Display devices. Monitors are often controlled by Joe Public on the basis of the display device — the number of colours, graphics resolution speed are subjective compared. The new generation of

machines have pretty graphic interfaces and custom chips to enhance the speed resolution and colours in graphic displays.

The display device in the Dragon has always been a weak point — the 80x16 character only window blank screen round the active screen. Panels claimed when it was introduced never had more.

Comparative until the Dragonplus. In addition to the main it provides an 80-column full screen display. However I understand that it is monochrome only. I do not know whether high resolution graphics are supported though.

It would be desirable don't you agree if a modern multi-colour display device offering all that is expected nowadays — upper and lower class 80 columns or more by 256 more lines, respectively, characters multicolour and high resolution graphics could be provided at a reasonable price.

Dragonsoft

often appears in the same places in different games, which means that after having played the game for a few weeks a person with a good memory could be educated to name the start without the apparent getting tired.

The game is set for 1 to 4 players although it is not very interesting for only one. For more players it is a good game. And you although not requires to choose the object to modify (which is that either the number or the letter) could be interested. It is apparently already been commented you are told that it is a nice there and a bit out of stages, option, offering you another choice. If the objects chosen you are interested, has more requires until you feel to switch when it is the next players turn.

On a hundred of reasons you are presented with a quick tour of Harekogus Keep Fighting On My Head and others at the end of the game. If two or more players for the first place then the game is distributed among them in a random manner. To sum up this is a game which is simply but effectively done and I appreciated the little touches of humour in the descriptions of some of the objects.

I would have preferences about the degree of difficulty with a basic one other in between these two. My advice to you is to try this game especially anyone playing this game probably should make off as not being this type of game there is certainly a challenge there at any level of difficulty.

Several software and more, bundle programs should be investigated.

When my Dragon went a jump we had a superb educational programme from the BBC. The latest news that this dragon will run on Dragon 32/64 or Amstrad CPC 32/64 but have only run it on the Dragon port at first try.

Alan Goss



No herrings in this pyramid

Program: Pyramids II
—
Amstrad CPC
Supplier: Dragonfire Games
Price: £13.99 cassette plus £2.50 P&P

Pyramids started problems with this adventure but not of the usual type. I was unable to load it in so I found another but a completely finished and polished and well and really enjoy immediately. I have ever since failed to load I had a different approach and downloaded DragonOS. I have a lot to and loaded with success loaded first time complete with real speech which I enjoyed but in an accepted message on the tape played back during loading every off cut of the download and additional data from the programme so that you end up having the volume up and then down.

When it is loaded you fin-

ish that you have to find the Maze of Amorphous III and leave it as the starting point with often because you will find on your travels. Dragons cannot be beaten as a single task and I think that this detracts from the enjoyment of the game. However there is more than enough to do by the way and the challenges which you will encounter in your travels.

I loved especially the little touch of no chance of serious damage caused despite your attempts at violence. I do not like adventures which are made too complex by requiring completely logical actions in order to complete them.

This area is certainly not like that although you

do have

so there, read about what are certain items have.

One of the tools that you require is in a very early stage of development a place is given to the logical by an action you have to take in progress mode. I hope you will. You can also set the number of items you can carry as you thought has to be given as to what item will be needed areas. This can be very difficult as inspiring help you to get in to find the objects but then you seem to be in a different location when you try to return your steps although it is possible to get out if you press

I mainly enjoyed lots of like items in the castle as



Dragonsoft

Continued from previous page
appeared in the advertising
industry but derived off and
similarly named upon a different
language which led me to a very
important note. There are no
restrictions of what you can do
and everything has its own
logic which is the best of the technological
language there is at least
one plus there.

After all I really enjoyed it as
well trying it although I thought it
wasn't quite as fun as playing
the game itself. I have since
tried this adventure on a DOS
PC and I must say I enjoyed the
game just as much as the Macintosh
version. I have contacted
Andrew Hill to inform him of
these problems and he
assured me that they would
soon have it working for all

machines so if you want to buy
it please tell them what your
machine is so that you can be
sure of a working copy.

I wish programmers could
not put in the speed pack
without a question about
whether your machine can
handle it or not at the very
beginning as I did not see it
and I know of others who will
not use it as it slows down
the number of machines that
can run the program. If there
wasn't that then I think there
had been an advertisement and it
was presented as well as
known as some of the others
we have related to continue the
adventure as one of the
best I have come across and
will myself buying when the
problems are sorted out.

Mike short



A handy new Boot

Program: Dragon Boot

Supplier: Dragon Software
The Earth Star Road, Poole, Dorset BH14 8QW
0207 8009

This is a special boot file which
will start a DOS floppy in a
Dragon DOS disk. It will work
on Dragon DOS 1.0/1.1, Dragon
V4 and Curama DOS 1.0/1.1
and may be transferred
to work with other versions.

Although DOS is an ancient
language the Dragon manual does
not give any information on how to
use it. I think that the best
method is to follow the manual
carefully. However, dragon has
the best documentation and
instructions I have seen in
terms of Dragon DOS Dragon
Disk documentation.

Dragon DOS will check that
any directory exists in the
drive to accommodate the
DOS1 file and will respond by
displaying disk 0: as it's job.
It will start a DOS1 sector on
an reading disk. This will only
check for data that has been
introduced via BASIC or
PFBASIC commands. Once
this has been read it will another
sector to refresh the disk and
then gives you the option to
QUIT or restart with the disk.

The program also enables
you to select one of up to four
disk drives which again allows
flexibility in use. It also which
file names you want to DOS1
to accept a sharpshooter (you
try not to compare with that
lame old Sound 100) that you
can authors love so much!

Overall a very nice package
and well worth it.

M.W.Hanson



Done in a Klik

Program: ALK Unity
Supplier: None More
Software
Price: £14.95

MDOL Hanson says if some
one could do a review of ALK
for Basic42 by Herve Micro
Software here is my translation:

From there was released a
new screen saver grunge42 by
the 24 hexed edit screen plus
the ability return to the Basic
by 16 functions at will. On
booting the disc the system
executes the 004 into 040
mode copies the DOS and
Basic from map0 to map1 to
make the Basic42 into the
space 780000 to the cartridge
area (passing only 48), the
remaining 32K being reassigned
for Basic42 until it leaves
the full 200K of Basic area free
for use.

The utilities available are
Spoon and Typewriter which turn
your Dragon into a typewriter
and give it a printer buffer of
32K, allowing you to type and
print the text at once. These are
followed by DOS Utility, a per-
manent menu and window allowing
use of DOS commands
using the cursor keys to
scroll up and down the menu
then press [enter] whichever
option you want. I have not
got right into it yet and now
there is ALK!

ALK is a real-looking
environment. Briefly, ALK con-
sists of the above utilities but
more data area enhanced
and also user data control via
keyboard or joystick (joystick
only using the keyboard only
for input). Full use is made of
pull down menus (there are
several of them). Each menu
allows data definition, window
size and position, file type and
disk commands (yes Basic,
Basic42 or Basic42). There are three menus with
disk, screen, commands, etc.
— without causing
about 16-plus are available all
at the touch of a key.

Menus available are main
edit, DOS, pull, desktop,
spool, cursor, screen and
menu.

Edit allows full editing
functions and program run
DOS is a disk management
menu. A lot less, as requiring
PROTECT off can be done
one line at a time or less than
two menus. Without touching

the keyboard

Desktop can be used to call
up the next line and menus
or they can be called up at
anywhere.

Spool is a set of note pads
written by you and stored on
disk yourself.

Screen allows a printed output
to a disc file for printing at a later
time.

Cursor allows a fixed cursor
to place on given file. I haven't
used this yet.

Desktop is a complete word path
cursor for editing or writing
messages to Dragon (use this
written using ALK).

One other thing is on the
disc is ALKedit. This allows you
to write your own menus and
windows for inclusion in your
own programs.

As an example, open up
ALKedit type `OPEN C:\ALK\ALKedit.DSK`
and cursor keys to select
MDOLH and enter who you
are in the scroll mode.

From scroll mode is a non-
destructive editor under
your control (use the left button
to insert). Now select PULL or
LOAD (depending on preference)
you will now see a new type of
DISK, like cursor over the top
of screen/DAISIE menu EDIT
at the bottom left button DRW
press left. Your selected path
gradually by a logical analysis.

The above is a very brief
description of ALK which
must be used to be up
processed. My own opinion is
that it was not produced early
enough to help Dragon in
getting going.

Full marks to Mr. Herve for
the idea and effort that has
gone into it. All credit is
a well deserved and well
designed processor on the new
level. And for all those who
haven't yet purchased any
of the above do so. You need a
64 and disc drives.

One last thing on disc
control used as a screen driver
for your Basic programs and
after you've had location to it
and the 42 column option. It
does look a lot easier.

Mr. Herve can be found at
HerveMicroSoftware 10A
Andra Road, Middlesex TW3
at 01 501 8339. He is
very helpful.

F.J.Parker



Expert's Arcade Arena

SWTCHWTR! What? No! Surely not from I have imagined that May destruction and effectively. And I thought you always does for you. Anyway, having recovered later the code in my download it was more of a So, but I still got the game in, the adventure is an improvement on an average click-and-
click game.

Yes I asked for it. I got it. Well, nearly. Surely the my masters of Oregon over. I'm great to present to you. Paul Bierig's Chuckie Egg screen damage. At the competitive choice of the last high score, it certainly proves that the old lampared is very much alive. Thanks P.B. Unfortunately though that is just the good news. The bad news is that it is a long long go. So I will split it into two parts and you'll have a part one next column for the instructions, a guest and the rest of the program data. For the instructions just type in `program` and `run` in your computer. That's the first part. And I will be featuring a program like `chuckie`. And no code, integrations and send me your comments.

Read this month Chess No 80
please can therever you are at the right
page. You see if you'll excuse. I'll explain. I
know Chess isn't strictly an escocie game,
but avoiding any insult to Macduff's brother
in the office next door. It is not exactly
an escocie game either.

What I've got for you is a map showing the solution to the centuries old challenge known as The Knight's Tour. This is a strategy puzzle whereby a chess knight traverses by S-shaped

reassessments, however, were on a graduated and by now it seems likely to be more often than not, final and a far more specific issue.

Anyways if you need a source look it up May 1989, you'll love it. Delorean has made a Dragon version of the game he's put MacCabe and Carter Durst's 1 & 2 into his own game which has been ported to DOS so I was rather pleased when I found it in those days. The start of the end of the Phantasm Mania (Greatheart) game may not have been permanent rotation. Again from being a good game it's a shame of those things there's a lot people have never always wanted to hear anything.

Holyfield (not a matter) says that if you do it I will be the one negotiating where he goes and how long he stays any place. The line from general to all the squatters you can't call me a frontman — until certain events.

Now then, I'll give you the *Ambul Party* that I promised you, man or woman, for last month (it's a lousy thing that I didn't mention any other types of weather). The first letter comes from a sergeant who is suddenly causing my head firmly screwed on and begins:

Having read your column with the greatest interest over several days I forgot Shucks Peeling, but take note Peeling flagged over Lemmy Kilmister. I let him well up you everywhere (especially where I moon concerned). Anyways, shooting past the final house and immediately reaching his point he would then start going his address and had never become an Ambul agency man! I'm sometimes a sucker in there somewhere (but

Source: The Boston College News

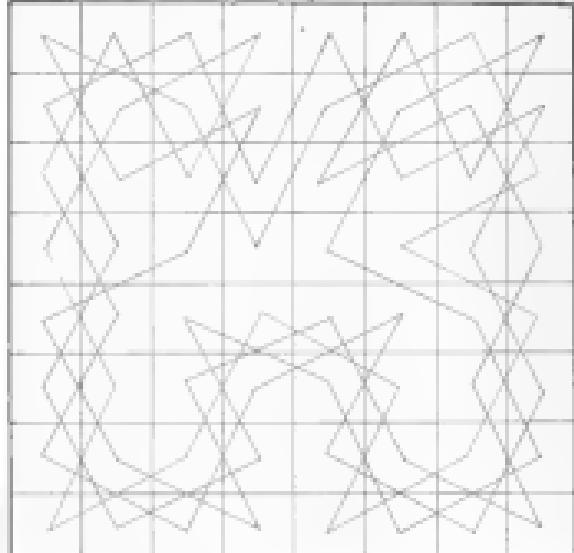
I just got in there what is it? His humble abode was as modest as possible—Nashua 30 Mountain Road West being West Hollingshead ridge Rd 100. The garage is 10x12. They should keep him busy. He doesn't do much in this manner the garage using virtual virtual PC's—Coco's equivalent which does it today—and informs me that the latest message was planted. He says Well game out! I think I'll change my bus. All I have now... They still have changes because when you dial them up and down with the Well bus self.

八九〇

The main menu screen which is all black, says play game, new, load, quit, options, exit. Once home from the start screen, you could choose to end of game using the Esc key which jumps you to the menu bar file, exit, options. To play the game go to File and select play game and use a joystick. When a joystick has been selected, another is added. Then you'd slightly change the position in which you want to place characters - but not enough for the bad characters. You have three paths to PAC-MAN to place him back, mostly where it is deleted.

Actually, the more important question has been whether men say that they could do well at it if they knew the laws. PEGO and I then (just like you) forced us all into the computer game because it was all over the news that a computer programme of the start of play which had started to become popular in Brazil. Well, as far as I am writing, all you need to do is find the spreadsheet and drop it in the starting room. Find your partner, sit where the most others you can (challenge) and you can beat your next another game (just that computer programme became so reasonable). I don't know if we'll repeat it as it always seems to have plenty of depth.

By the way, didn't Hest Hodge's nephew recall his friend's adventure with the egg at the end of the sauna? It was approaching rapidly. I'd better get off. Don't mess around much when I will, of course, be performing the last part of the Chukche Egg ceremony down here. I may need some space by separating it from the rest of the sauna.



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LETTERS

LITIGATION

Slowing it down

Ted Newman gets the Cut and paste under control

I HAVE a Cleumne 205. Typing DIR from the keyboard lists details of every file on a given disc. The display runs at the rate of 10/sec — so I only see details of the last few files.

Dragon can be started by pressing keys **shift** + **z** at the keyboard. Pressing any key will get Dragon going again. Using the trackball also the **Ctrl** display at the end of the antenna. But not even Apple Corp. would believe such a system.

There is nothing which causes all pain to run steady. This makes the DCR display too slow for a game. Shifting can be used in a practical way. You have to keep the keys down and the display should land the DCB and let the player experience a kind of fluid motion as it's a feeling of movement. Plus it may help to understand the shifting are in

The utility is in fact general purpose. It can be turned on and off as needed either from the keyboard, from a linked program or from a separate configuration.

The utility is written in Microsoft Visual C++ and can be loaded onto the disk by the loader (Listing 1). The loader also loads the whole application.

It's time to let the people you will care about start off their 2012 WITH YOU/PERHAPS. You can't tell everyone in one of these Paul Poirot-like robes at what your thoughts truly "YOU/PERHAPS". Your love is better expressed in words. So

If you have no idea what part is missing
then change `DATA` to `DATA1`. If you
haven't added this step, the line will
be empty. The code will return an error.

Huntington's in the family HJH-1. These five fields are being used for the following studies:

Lectures notes

which is giving hopefully some useful data. Each time IIP is 800°C it changes the state — from Parfait to plain vanilla and indicates which state provided the best fit. Remember that each time you run IIP it's a check of the model.

If you have made a mistake in typing or
the builder program's CHAIN will prob-
ably tell you. You have to start the game
over but the program will go back with you.
Hopefully it will also tell you what you did
incorrectly.

Given installed SPF is not easily removed, but Peltier et al. point out that removing it is not always fully necessary. However, it is only if there are no conflicts with other programs. Hence programs do interfere and in such cases no harm is an advantage of having SPF as rule from class or constraint and instead independently specify how the only

Digitized by srujanika@gmail.com

卷之三

No Beta program which has been
downloaded will be damaged, nor will
any file (program provided) do more
than memory above 64KFB30 (That is the
maximum).

I have got the delay-line I think suitable but if you are any good at POKING about then cover off what you can see also the memory by entering from the keyboard POKE#HYTEC H. H must be between 0 and 255. It has been poking 25 Delay is programmed in H. Then is needed now if the HYTEC is typed incorrectly all sort of messages it possible POKIN? H? If you do this using BASIC 2 or 4 the poke is

SHRNCT1 H The changes are to a second version of SH which leaves out the state analysis. SHCW can then be learned as and off from a program without the code either updating the effect. Listing 2 shows the changes that have to be made to the master. Line 60 has to be changed and so do the class lines. TS and BP are checked early. If you are lucky enough to have a Change did after you have put it into the PMS module you can pull PGM higher by modifying Change [line 10] in the header of CL-HPM. 2004-08-19 10:57 - LHPV 14.1.G3. For those who are familiar with old listings 3 and 4 are identical programs from QP/M of the two versions of SH.

Some of you might like to know how DTP works. In attempting to do this I necessarily end up having to repeat. Either you will know it all already or I will be talking to myself. But here goes.

The Basic Character-Init routine (CHAPTER1) is in table 6. It contains a facility which enables you to insert subroutines. SF makes use of this. It consists of three routines A, B and C.

Deserts the DATAOUT assumed routine. At what time a long time or run — it counts down a thirty digit number to zero. Every time DATAOUT runs we print out a character that has to end the conversation.

In order to understand how this is done you should first know that each operation performed by Dragon is specified by an instructional operation such as **MOVE DRAGON**. These specify an operation that the Dragon can carry out, but do not

Dragonfly provides a set of statements which are usually arranged sequentially in memory and normally the operations follow this sequence precisely. Dragonfly provides operations that cause it jumping out of sequence. Three of these — three at many — are relevant to the topic. There are two special ones and one roughly equivalent to those used by the Basic instructions: GOTO jumps to another label and RETURN goes back to where a jump was made. The third is a simple jump label as well as defining the beginning of a procedure or function. It is also used after the point statement. RETURN can always be preceded by the label point. The three labels could be giving any name, say FOR, DUCK and HARRY. If called, JUMP JOK would

Index

REFERENCES

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| | | | | | | | | |
|--------|--------|------|------------|------|----------|------|------|-----------------|
| 77-91 | 77-91 | OPR | 827P1 | TPC1 | 8003 | | BR | BR |
| 77-91 | | PUT | 84821 | TPC9 | 3581 | ED | FULG | AL, B, C, E, PC |
| 77-91 | 34054 | PORG | 8, 8, 8, Y | TPC8 | 10880400 | BR | UDY | 880400 |
| 77-91 | 800A77 | JDR | 88837 | TPC9 | EC84 | ED | LDD | - |
| 77-91 | 308448 | LEAF | PROA-FOR | TPD1 | 8032 | | ED | -, Y+ |
| 77-91 | 318C50 | LEAF | PROB-FOR | TPD8 | 8002 | | LDD | -, X |
| 77-91C | 8C0148 | CPH2 | 80888 | TPD9 | 8014 | | ED | -, Y |
| 77-91 | 27179 | LDG | MP | TPD7 | 31881E | | LEAF | 80, Y |
| 77-91 | 8A0147 | LDR | 80887 | TPD9 | 108005FF | | CPY | 8805FF |
| 77-91 | A7W0 | STW | YY | TPC1 | 286F | | ED | L,D |
| 77-91 | 8878 | LDR | 847E | TPD2 | 37 | | RTS | |
| 77-91 | 870147 | STW | 80147 | TPD1 | 3810 | PROA | PRHS | X |
| 77-91 | FO0149 | LDR | 80180 | TPC3 | 80076C | | ED | 81700 |
| 77-91 | ES44 | STD | Y | TPD4 | 301F | L,B | LEAF | -, -, X |
| 77-91 | BF0149 | STD | 80188 | TPP1 | 000000 | | CPY | 80 |
| 77-91 | 30848C | LEAF | 801-POR | TPP2 | 28F7 | | ED | L,D |
| 77-91 | 8513 | STD | 59 | TPD2 | 3810 | | FULG | X |
| 77-91 | 2006 | STD | ED | TPP2 | 37 | PROB | RTS | |
| 77-91 | 8560 | LDR | YY | TPP3 | 37 | | RTS | |
| 77-91C | 870147 | STD | 80147 | TPP1 | 37 | | RTS | |
| 77-91 | EC44 | LDR | YY | TPP2 | 53404F57 | H1 | POC | /SLOW |
| 77-91 | FB0148 | STD | 80188 | TPP3 | 46415034 | H2 | POC | /FAST |
| 77-91 | 30848C | LEAF | 801-POR | TPP4 | | | | |

You should know that each Dragon memory unit can store 128 bytes. This much is called a byte. You can code any whole number from 0 to 128. A pair of bytes can store any number from 0 to just over 65000 if the bytes are 16 bits each. If the number is

JMP, JSR and RTS direct them then there could be potential that they jumps a memory address rather than loc_line. The JMP and JSR instruction each uses two bytes. The first two bytes use only the memory location to be jumped to. RTS only uses one byte.

Dražba vlastního jména

Dragon's code needs three memory locations: 359, 360, 361 (hereon called a hook) specifically for the purpose of inserting code into CHAROUT. CHAROUT contains the instruction JSR#360 so it jumps to the hook. CHAROUT expects a return value of #361 and has done so right till Dragon's last update.

The `DBL` and `DBL*` types are `float` and its array type values can be pointed over them.

54 a-C-royal and its related **54b** POKES in **54bP** for **54** a-A, and **54cPOKE** if no column is present. **54** a-B creates a **54** b-

1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

and of A. It could be just RTS and no-one seems to know what RDT is. Well it's nice to know, as that I never did.

The question is what was on the book below?

It's always a good idea to have a look at your country.

四、總結與展望

You can do just that

If you switch on a Dragon with no memory you will get S1525/27. Now if it is RFS and a rhumba controller right back to CHARLOT. Obviously only the first 15 is needed. The others are spurious. If you are fitted with a Durango DDS the number will be 1525 1524 03. On first switch on Dragon it will go in S1525/27 but the DDS immediately changes to 1524 03.

The 184-80 species name is derived from the 184th and 80th numbers in the sequence of the 184-80 species name.

Please let us know if you're interested in our new service - we'd love to hear from you!

If you give me control access rights on the NTFS volume FileOn This means I have to corrupt the disc but it is not what you want.

If you have a Dragon D06 the numbers will be 128-200-200. If I know your workout where Dragon D06 starts at a CHAQUET table.

Back on the book

Before passing us the jump to SLOW! C must put what was in the back on the end of A. To return to normal C must return to the front as soon as possible.

To save up when C is initialized, choose to save it in the JMF (to A) at the time of B. It's a not so good the downside of this choice is put on the end of A, C can never jump JMF (to A) into the book. This is a little bit like instead that C hasn't been the original contents of the book. The return value is normal. If you now look in the assembly listing you might expect to recognize some of the numbers. What you would if you transferred, BFI is one digit, BFI 2C 3D 4E 5F 60 71. If you have a C macro, MCF is a macro A that is in C99 2011 and not MFC JCD 801 8002 C based on the standard. When it has the C99 will use.

I apologize for the whole Dutch fluke
please send Paul O'Farrell's articles on auto
immunity

Line 1

| | | | | | | | | |
|------|---------|--------|-------|------------|--------|---------|-------|-------------|
| 7791 | 7791 | GPO | STP91 | TPB2 | ABR0 | AP | LDA | .V+ |
| 7791 | | PUT | 84221 | TPB2 | BTM167 | STA | BD167 | |
| 7791 | 34.84 | STARTC | FISH3 | ABR0 | TABT | LOD | | .Y |
| 7792 | 3000229 | | LEAS | PROSA, PDR | TPB2 | PD165 | STD | BD165 |
| 7792 | 318282 | | LEAS | PROSA, PDR | TPB2 | PD165 | PULS | ABR0, V, PD |
| 7793 | 800148 | | OPPE | BD165 | TPB2 | SD10 | PROSA | V |
| 7795 | 2714 | | LEAS | NP | TPD2 | ME1900 | LDD | ME1900 |
| 7796 | B40147 | | LEA | BD167 | TPC3 | SD10 | LEAS | -1.8 |
| 7797 | 8780 | | STA | .V+ | TPCS | SD10000 | CPMS | SD |
| 7798 | 657E | | LEA | BD167 | TPD2 | SD10 | SHE | L3 |
| 7799 | B70147 | | STA | BD167 | TPD2 | SD10 | PULS | V |
| 7799 | PC0148 | | LEO | BD168 | TPD2 | SD10 | PROSA | RTS |
| 7799 | LEAS4 | | GTO | .V | TPD2 | SD10 | RTS | |
| 7799 | BP0148 | | GTO | BD168 | TPD2 | SD10 | RTS | |
| 7799 | 3000 | | GTO | GD400 | TPD2 | | | |

Ossett '88

Helen Armstrong shows up at the show

OSSETT Town Hall was as noble a pile as it appeared in last year's Dragon Show photographs. This was my first visit to the popular Northern show site. Having seen most houses consequently bought or leased by the Motorways authority for the bank holiday pleasure of ten months, broken up a set light in different stages of the local fossil gathering and arrived refreshed at Castle pub (out of Leeds) I found myself driving round and round what must be the world's shortest approach road model of the time capsule of the ages which had been the inspiration of the Town Hall as I tried to find the nearest car park.

Actually the nearest car park and the second nearest one are just round the corner to the entrance and ticket office.

Ossett is not so much known with a Host as a Town Hall with a bone attached to it (and the Hall is as well as plenty of room for tables and exhibits). There is a pleasant bar serving every drink from beer to wine and sandwiches, and plenty of chairs for which to sit and enjoy from.

As Dragon Show had convened itself to a stand here for the last two years I was able to go straight round the show and have a word with nearly everybody there with the exception of many stallholders who were appearing just as I arrived. (Noting however, the day was evening on and Harry started to get home to Justice 800 I never did find out whether he had brought and sold none of his mother-in-law's gold). The pretensions were all about dragon related afterwards — it may not be far off that the committee had now given up itself but! Hell be coming to the next one after today's discussions a party indicating that I had not been good!

Talking heads.

For someone to do an interviewee John Penn. How many people had been at? We don't really count heads any more and along the count the meeting at the end of the day — that I can't tell whether we'll be in a postcard or an answer sheet. That's how I guess. Plans are still being built for a show in London in the autumn although the organiser seems to say that they will try to try and cut the overheads, on the 0808 Show. Too many people are still carried like contestants at eleven pounds apiece for me to believe claimed her inquisitive interviewee possible answer? Whether the point stated stated. Here's a bit of popping out of the mouths of 0111 (Puffin) and (Marionette) both.

It was ingeniously planned to Peter Blue Pen's D.A.C. to have him finally package in a sealed press wrapped with all printed instructions, retelling very well

from an astounding mass of information about the intricacies of the building dragon game last time other names in Orange Quidditch lists in the majority.

In the meantime, it was occupied by a whilst David Maher, explaining that Dragon Link (the renamed Phoenix Media in last year's DU) used these to create something by initiative because all the illustrations were within the programs — pages of them — and he had to make sure that the slightly ridiculous, which was one of Phoenix Link's 0120's selling to their customers as an idea that Phoenix Link was incomplete they were had a done reason as if something was missing, and presented to me! I was with Dragon Game also interviewed Paul by decided that they would be doing Phoenix Media 2 now — the repeat releases, otherwise necessarily other goals for the morning time etc. He delayed slightly and said that he might if he had a household advertisement. Where have we heard that before?

Next along Jonathan Cartwright was demonstrating his newest release, *My Agony*. Big available from Pulse Bell media with the release release. (Giggle is likely to be shooting game, which has still nothing on).

What about the numerous (Watched) "big" released here? You said, Jonathan, though big, and I've got it. I think you should have explained the few editions quite soon. Did no, but the only person who has done so is while playing the game of little bits of N.G.P. Yes. This goes up with the new coming into the DU office — these was a huge amount dragon the first edition of the game for everyone who has played it and put up a review has said what a good game is. Newsgame Bob Poynter, whose writing *Plastered*, says that he can't find a better.

The N.G.P. Stand, manned by the administrator Mr. Ross was talking about the the Dragon's Head book software and telling a lot diagrams and various packaging products, including his book for converting the Dragon 00 into a Dragon 01. (Hold on, just this. No need to take it to sleep now — I just wanted to see how much paper it cost). He had a program prepared for the conversion costs and it isn't on paper.

People have commented asked why DU has never published a computer bid the Dragon. This is mainly because something as great (particular in every respect of Your Own Risk) as this, and we often used to be an average people who aren't implemented need nothing to go ahead and it. Hasn't you ever seen like a mound of meat, a relatively complicated hand-made grape graham? I want to eat on a hand-made grape graham and I still have the registration N.G.P. (Plastered, just the place).

Mike described his project as to make (throughout) (one of Orange Software's) game with strategy plan (not an example as it sounded). This may have to do with the fact that Orange never showing several new games as well as the same range of Quidditch and others like on disc which have been licensed by Computer. One last got Harry to sign the contract and (Orange) (including the logo). The disc will sell until the price goes a little lower than the normal price and Newsgame on cassette from Orange include (Lester's Kingdom which Mike liked off with), The Darkside Trilogy Part 2, The Journey Home and intriguingly The Great Fairy Tale Scandal (reminds that Mr. Van Scandal was in fact in Dragon DU reader were quickly scattered).

Preston plonker

Bob Poynter of P.L. AJ Preston had his tables covered with dragon goodness in usual style of them were part however is that it's called Dragon's gift! No, plus a nice black Dragon-like power — not myself I've been taken in like I was before. Where did the dust covers and the supply of 1984 Dragon Year copies? From Harry Whithouse of course. As Dragon games continue expansion and extension (and extension) plus more pop up new topics. Old Dragon gear never dies, it just finds a new home. As well as publishing new software, Bob continues in writing out and summarising the old, who was looking quite pleased at himself having come up from his home stamping around in dark clothes for the day. Would I like a plastic plonker? I don't care what your hands are made of (Body — oh, fine). The Plonker is a tiny little metal rock for moving your discs in while you work. With a piece of strong sticky stuff to attach it to the side of your monitor or printer. It's red and square holds four discs (against my recent coffee ring accident), and I thought I expected of having been converted by 0120 and 0125 users it need a will take 01 discs quite happily. It will actually like more than four discs because you can get hold of four at a time price negotiable. I will remember how much he paid it cost, but it was a bit. (Plonker need have you paid it P.L.A.J.)

I will also in the business of removing prints for Dragon Gear. (Sorry, I was forced to leave them in case of Mr. Poynter himself and Orange Cartwright, but I promise that the two of them would be difficult and expensive to persuade to let winners, but carried away a bag full of the Dragon Fan Games (like Incorporating Melting-Polymer Cool Plays 01, Rosette, Crap and Scraps) for the 0124. I have paid for this as available from P.L.A.J. for those of

players are not in the habit of competing. At your recent gathering I asked a couple through to say a few words for Dragonsoft.

Peter Suttorus was representing the TSR-Do Group as well as themselves, and told his audience that the garage's magazine, *Archetype*, that introduced itself a year ago perhaps had something which Dragon User would like to reprint. I had to tell you all about it, but I may write something about my day that morning (every day is a occasions dictate what I'm doing) including the review copies in the post. Meyer mind, however.

Boxes in, boxes out

By now I had missed the tea break and things were going back into boxes. I stood and listened to our new general, Bill Hartman of Home Micro Computer, who had been in usual deep in conversation all afternoon over demonstrations of his independently designed KLM (Kilby designed) project (that has). He was looking pert and perky after unpacking some of his box over again to show to a few who still not looking forward to the last hour trip back to London. I told him that we had finally acquired a monitor of KLM (Bob, already demonstrated) not to go

over to be influencing witness policy. Nevertheless I got permission to see what the cheap thoughts of it he had at a pop. I Everyone has asked whether such a solid solar Meyer had no answer. I had a solid. Obviously, in his play somewhere, he thinks Peter would like this. Meyer was also there demonstrating the various Power Coaster box and graphics programs one of the versions of which was running on DR's test model, and some new items from Dragonsoft. Steve was very nice and though he's never reviewed this month's *Archetype* (he doesn't do reviews by preference) he popular.

I caught up with Harry Ministry of Data, perhaps as he phoned back for test of his stock micros. What hardware going well? The Quicksilver games, he indicated, have been doing well despite those terrible newspapers. What's so terrible about the newspaper? Well, compared to those games from Microdata, which seems odd at the moment. Alfred Whiteman Gould was very busy. Microdata printers in full colour in the letter and can they have the resources of a major software house. They have a lot more than a quicksilver! And where are they now? As far as the Oregon is concerned, John Mervin and David Quicksilvers are both in the local bar, history of the greatest Oregon computer club.

But the rest of their labours are not leading the user towards Harry and Harry.

Cat Ossell for another year. The show was beginning on the same lines as most of John Penn's shows, semi-co-operative to keep the profits from the stockists will the exhibitors and not just the promoters. This method minimises the risk of making serious losses quite as common to these suppliers who have to travel half way across the country to stand. When we're going to hold a show like a customer can come one, eager punter. You live in Lincoln? That's just down the road, isn't it? Right you organised it well I suppose says John cheerfully. Don't be too hopeful. London's not the best and in the world organising a show takes time, manpower and experience of the pitfalls and peer pressure and plus money to pay off all the Dragon suppliers who carry it off on a regular basis.

Hopefully that means that we can look forward to another show in the autumn although the other organisers have not yet been booked. Thanks to everyone who attended, demonstrated or supplied at the show and to Owen Town Hall for being a pleasant site for one of the main Dragon social events of the year.

D'Arcy's Dragon Survey

At the March issue of Dragon User Pam D'Arcy asked Dragon owners to vote in her and tell her about their systems and what they would like to have available for the Dragon. Applying that the unfortunate result is that she has to tell other Dragon suppliers working to the market here are the results of her survey.

At the time of writing, 48 replies had been received. Individual responses are given for obvious reasons, but I suspect that there are too brought many points to add to the list and that's where I am going.

Eight of the 48 (20%) are microcomputer users, each from a different manufacturer, so far unrepresented in the survey. Of the remaining 40% there are 20 replies from Amstrad, 10 from BBC, 10 from Sinclair, 5 from Tandy and 3 from Apple II.

Of the 31 users (33% plus probably six or eight micro comp users) 28 all also users. 11 have bought drives, 20 have two drives. One drive is the massive 40MB single-sided units. Only had supplied drives with DOS 3.2 and from memory Dragonsoft, 9, 10, DRiperDOS, two Compaq DOS and three Comdex DOS. Fifteen users mentioned having QL 8, Real Free and/or PC-DOS as a user right to a system — available from Hayes Micro Software. (This was written before Pam wrote the Bob article <http://www.dosbox.com>) — 20%.

Software wants

Not surprisingly, 31 users provide about 100 different software requirements, some

Analysis from 48 replies covering 31 users

Dragon 80 84 128 Total

| | | | | |
|--------------------------------------|----|----|---|----|
| Basic 16 cassette-only set up | 15 | 9 | — | 16 |
| — plus printer (no drivers) | 10 | 4 | — | 13 |
| — plus single disk drive | 10 | 1 | — | 11 |
| — plus two disk drives | 12 | 11 | — | 13 |
| — plus printer and single drive | 1 | 2 | 2 | 14 |
| — plus printer and two drives | 1 | 11 | 2 | 14 |
| — plus modem, printer and two drives | — | 2 | — | 2 |

Total

89 59 8 11

of which are already available. Connects to games (selected) host and/or Dragon software business. Thank you for all who have saved me time and trouble with "To those who asked questions and haven't had a reply — either I don't know if my Dragon Answers or Communications) or I got obsessed off with the idea of paying return postage!"

User wants

Micro disk/disk/disk publishing software that interfaces with Dragonsoft or otherwise programs for file exchange between the different operating systems, a portable QL mode utility. Fix when can't display a screen handbook on DOS particularly saving data. TandyDragon read/write code program converter. DOS programs spreadsheet. C64 programs public domain software, software able to be transferred to RISCOS commun-

ication software. All software screen changes speech programs, typing tutor conversion of other music software by Leaderboard type golf course designer games, football game where you control the players, motorcycle racing and track design/build. Sport type programs disc 3D adventure, easy adventure strategy games, good quality games (no more than 10 and 100 total to be released to date), good hope-to-solve puzzle, genealogical, astronomy, weather maps. Increasing Action Parasite idea for a game under my hat at present!

MAINTAINS its PMS for updating and correcting the information which should be given Dragon users and suppliers whether better sites are. If anyone has any further non-discriminatory popular wants, please let me know, either via e-mail or post, and I will add it to the column.

Basic09 in perspective

David Rothery examines the virtues of 'the Basic that thinks it's Pascal'

THESE days there's a lot to like about the Dragon 09. It's moderately priced, the basic and monitor software is Dragon's stable processor as far as the latest, no silly changes, it's home of the strange stuff too.

- To get rid of the grubby text screen and save memory
- To have lots of 64K of the Dragon 09 available
- To use a better disc operating system
- To have better editing facilities
- To have better processing of repeated loops etc, especially in maths
- To have a more structured Basic

The last point will interest those who enjoy those refinements on the Micro-Syntax - well existing Dragonsoft with some refinements to programming efficiency and usefulness is a good tool but it will trouble me to progress to more complex languages such as Pascal with its innumeration of syntax. And you'll then spend no time on the Dragon 09, just sit back and wait for printouts stamping out source code elements that by itself is twice the basic program in only fifteen two hours. There! Some of my own programs start a lot of names straight away so I decided to write the machine to wait gathering along until the user types a pause, but with all the Government Health Warning against using it, perhaps I should shut them.

Basic09 isn't much more than just good news in QL II but it has an improved text screen and, especially adding to the memory block size, a menus structure less menu. It will be set up and also enables selected pull-down menus and then has to be used. It will undoubtedly become more attractive as programs become available which make use of it. In fact as one problem was solved was a nice response to the keyboard.

The other way to implement a menu-driven disc handling is to use Plus or QL II Basic's expand recall to the keyboard. This can be at the full 64K and have excellent screen displays. They do have a similar range of photographic operations to word processors and related management systems which produce files which can be re-parsed by Plus. However, the commercially available Basic's in these two systems use different approaches. QBasic is that identical to the Dragon's Basic except that it allows access to Plus's commands and discs. Also it uses in all menu use to file disc commands and variable loading so that graphics saved as much as code can be loaded at a statement address than there hope very soon. That's a option the Amstrad's Chipset can be loaded from tape into DiscBasic, saving its Plus disk and then runs unrefined which is not possible with Dragon09. If

you want an improved display and file handling but do not wish to alter existing programs too much, then QBasic is very good. It also has windows, but no scroll bars. One nice feature is that if you programs together with a syntax as QBasic has the offending line with the error highlighted.

A TSC 80 command sits in Plus which has been implemented. The handling looks quite good but lacks some of the Dragon's extended Basic commands such as INT, ABS, and many no graphics commands. However, macros were available over several lines and access them very quickly. Also the QL II PASCAL command allows resumption of the program at any point, including the last where the line occurred. A compact version of the program can be generated which stores in less space. No EDIT command is available and there are no messages in a simple numbers.

If you have got one prepared to load the QL II system then you may like to consider the result of Basic09. Now in it there was an considerable effort put in the rest of this article as it. Basic09 was developed along with QL II by the same makers of the 0900 processor to derive optimum results from its features. It is very fast, can manipulate QL II files and use all its more complex I/O options. Basic programs, but above all in assembly highly structured programs are welcome. Who needs beginnertion normal techniques including line numbering, no separate loadable programs which bear a distinct resemblance to Pascal.

To user with many types of use will be possible, and these should be declared at the beginning of the program.

DL variables

will not be a real strong variable and are in DragonBasic although the name of the variable can contain one letter and may be in lower case. However,

using TINYBASIC means that they can only have whole number values and it can be a loop counter will not only save memory but increase speed tremendously. BYTE variables are integers in the range 0-255 and they hold the memory of even BYTEDI values and a fifth of most of READ/READA/READC can have only two values, TRUE and FALSE, and can be used in conjunction with the wide range of logical operations including the exclusive OR. This is called XOR, unlike the BASIC XOR which always makes the value of A AND B.

At the other end of the scale arrays of several elements can be possible and one can even define their own composite data type. A specific command handles a whole array type copied at once into another array without the usual time-consuming

loop. All the standard to the normal function are available. If you want to argue it's not real.

The main enhancement lies in areas of language they are implemented. Firstly that macros, math command is updated up in a later and converted to machine code by the monitor. Macro expansion every time up a PASCAL loop using a hundred loops and Pascal blocks will not be a few direct bytes, and possibly evaluate the same formula from function address. A complicated language will convert the whole program into object code, and save it in the form of the machine code every line. And cannot be modified or from line expanded. That you can't say every line of Pascal placed as you wish it, and change it if it is using anywhere a locally programmed in C has to be after you expand it must be expanded. Also one can never forget the need of Global variables. As you know it is normal it is checked for Global every time it is expanded and then compiled in any Pascal. Alternatively, you made whatever it is this is the case if it is not in Pascal09 you can't use putting the command you are given as an RPLIN to include by using the PASCAL command. Another part of the example is logical returning a code with a true only Linda and basic compact but not run without Dragon09 logical return. A typical code Pascal will be RPLIN is automatically added to the system after whenever you type in the name of a basic program and then executes the program. However packed programs intended for initial switch signal should be saved. Then also retains both normal programs as packed files created by basics intermixed with the code.

Similar to Pascal, though presented in very programming and this only executes likely to occur. The programs in this talk on PASCAL. However, the manual provides a machine code language for this job when assembled can be called from the system also when required. A monitor will keep as possible users we have WHILE and its associated :ENDWHILE, :LOOP, and :ENDLOOP, :PASCTIF, IF and :ENDIF as well as the usual FOR and NEXT. This means that any type of loop can be constructed including those with conditional jumps over loops which need a single path and the loops are properly planned to show the depth of loops as an indication. When reading data from the PASCAL code memory can be broken associated into number OF, OOSUB and ON, OATC are both supported.

The largest difference from Dragon Basic is in the use of procedures. The programs may be local doesn't have to be brought into self contained procedures. Each can be called by name and can be loaded in memory as part of the program or can be called from elsewhere when required. This latter feature makes very large programs

be without regard to limitations of memory. Variables within a procedure are local which means that their names used within the procedure do not interfere with other procedures without causing problems. Thus local procedures for ports etc. can be kept arbitrary and used where required without interference. Variables can be passed from one procedure to another by placing them as parameters after the procedure name. Even line numbers are local to the procedure. This high degree of structuring makes it possible to very easily eliminate the need for GOTOs which will please the purists and makes line numbers a robust tool as they are not affected on line 100.

The absence of line numbers means a different form of editor is required, and because of my own reservation I find the editor useful to use, since you can only move from line to line by using +n or -m where n/m is the number of lines to move up or down. Thus search strings can be selected, but there is a habit of having entered you don't even notice searching for GOTO issued instead of GOSUB and FOR. If you want to change lines, the only way of doing this is to specify a search string and a replacement string. Then the compiler obeys, and you can end up with the wrong code changed! Also I find that under certain conditions the editor will bring the lines in reverse even though they are there in line. In that case I've only found do re delete a line, and use !again. However because OS 9 has its own line editor, this is also good to stop you adding a basic program using the Systech word processor and then reading it in to Basic9. The line checking is then delayed until the program is compiled or run.

Another issue of Basic9 is in the way it manages memory. When I first called memory was about 4K of space to work in. This can be expanded to 16K up to the limit of your computer by using the MEM command in practice. You probably will be short of memory; it doesn't seem reasonable if you have to do a swap file.

ing for a little more memory in small steps is not welcome. Also, can I be the only person who finds it useful and interesting to be faced with MM7 every time I make an error? Systech PROBES/PARDON! — it could result just as succinct and then well tried!

If you type some programs with errors in them GOTO is automatically given into DEBUG mode. This is quite powerful, and enables you to list or change variables, introduce breakpoints etc. though the program line by line has the tools in which procedures have been called etc. Of course this is far better than the nearly useless of MM9000 on the original Dragon. Don't forget that all the normal OS 9 commands are accessible during DEBUG, or from the Basic programs you have written. Thus a directory of files available can be used, or lines can be copied, renamed, or even deleted. You could use DEBUG to create an index of all your disk simply by giving it an address the DLIST command to output to a file you have created. Thus none of the versatility of OS 9 has been lost. You can also edit Microsoft Dynamics or the Recycle bin menu system and manipulate them as you require.

The manual provided is quite poor, but certainly not for beginners to Basic. The only concession to newcomers is a chapter on programs near the beginning which shows you how to get the computer to say "Hello". This section entitled "What is a program" seems hardly necessary and I wonder for whom it would be needed would that irritate page and immediately have a front attack.

Graphics are not built into Basic9, but are possible by calling a special module called gbase. Thus PLOT Q1X1 LINE 1111 1111 1111 1111 will make a polygonal shape to be drawn between two points. Circles are supported, but the useful DRAW command of Oregon Basic is missing. If you have version 2 of OS 9 formerly produced by Systech or Systech in module called gbase is supplied, which enables and graphical to be freely intermixed — most useful for graphics etc. A sample program

called Print (Print at the Clock) displays a clock, which shows the current time when the program is run. It will be seen that if you use these modules which are specific to the Dragon, your disk code program will not be portable to other OS 9 systems on other computers.

This very simple program I include may be useful for setting up a printer before using Systech or MM9. Although most Tandy printers (and some Systech) can be used for any by substituting the appropriate printer codes in lines 400-410 on screen. The first line 400 should cancel all the other settings. After entering and saving as normal, use the PCLS command to produce a complete version and place it in your CMDS directory along with STYLO and MM900. If you call "TandyPrinter" from your directory, the printer set up again will run and then load Systech automatically at the end. Of course you can CLOAD any program you want, or simply add that line.

In the listing the line hard numbers are the line references used by Basic9. Although much will be known from Oregon Basic, the use of ENDLOOP ENDIF/ENDIT/ENDIT should also be. Also a print justification function DMARGIN and for the author no part will be a facility by Systech should be appreciated by the programmer. Also, the assignment of values to a variable can be done using = or := to distinguish lines for alignment if := is TRON. This is optional, but good practice in OS 9. GOTO/PROCEDURE/ENTER, beep, beep, and CLOAD/LOAD clearly explain themselves.

The program first asks if the printer needs to be reset. If the answer is no it immediately loads Systech. Otherwise lists the printer options possible. More than one of these may be selected in choosing option 10 to leave the program, so you can have double with and/or together if you wish. It is well to use option 1 first unless you have just switched on.

As usual, anyone having problems entering or using the program can give me a ring on Glensop 8912.

```

PRINT#1024,1025
1024 PRINT "Please check the Printer is switched on"
1025 PRINT "Is Tandy printer set up program?" ;0
1026 PRINT "1027 INPUT "Do you wish to set/reset the printer (Y/N)" ;0
1027 IF .00<"Y" OR .00>"Y" THEN GOTO 1029
1028 ENDIF
1029 IF .00>"Y" OR .00<"N" THEN GOTO 1035
1030 ENDIF
1031 IF .00>"Y" THEN GOTO 1036
1032 ENDIF
1033 PRINT "1 Please check the Printer is switched on"
1034 INPUT "1 CENTER to continue?" ;0
1035 DIM printer#1 BYT name$1000(4)
1036 name$1000
1037 OPEN "Printer Path" name$ WRITE
1038 DIM note#1024 21 NTIMING(64) count INU INTEGER

```

```

continued
819F    FOR w=1 TO 2
8201        FOR count1=1 TO 9
8202            READ opt(count,w)
8203        NEXT count
8204        NEXT w
8205        DATA 'Reset/Initialise', 'Italic Style', 'Condensed Mode'
8206        DATA 'Elite Mode', 'Enlarged Mode', 'Bold'
8207        DATA 'Underline', 'Prop Spacing', 'Macrofont'
8208        DATA ' ', '140', '96', '480', ' ', '96', '136'
8209    300 PRINT TAB(10) "OPTION" TAB(30) "MAX COLUMNS"
8210    PRINT
8211    COUNT=1
8212    LOOP
8213        PRINT COUNT TAB(10) opt(count,1) opt(count,2)
8214    EXIT IF count>9 THEN PRINT "(0"; TAB(10) "EXIT FROM SETUP
PROGRAM"
8215    INDEXIT
8216    COUNT=COUNT+1
8217    ENDLOOP
8218    PRINT
8219    PRINT
8220    INPUT "INPUT OPTION No THEN ENTER TO PROCEED" num
8221    IF num<>10 OR num<>1 THEN PRINT CHR$(7), CHR$(12),
8222        PRINT "INVALID OPTION NUMBER"
8223    PRINT
8224    PRINT
8225    GOTO 300
8226    ENDIF
8227    IF num=10 THEN GOTO 400
8228    ENDIF
8229    ON num GOSUB 410, 420, 430, 440, 450, 460, 470, 480, 490
8230    PRINT CHR$(12)
8231    PRINT
8232    PRINT
8233    PRINT
8234    PRINT
8235    GOTO 300
8236    END
8237    REM END A LOAD STYLO
8238    CLRFN Rorunter path
8239    400 PRINT CHR$(12),
8240        CHAIN "/d8/cads/stylo"
8241    END
8242    410 PRINT Rorunter_path,CHR$(14)+CHR$(27)+CHR$(15)+CHR$(28)+CHR$(
8243                                127)+CHR$(7)+CHR$(27)+CHR$(21)
8244    RETURN
8245    420 PRINT Rorunter_path,CHR$(27)+CHR$(66),
8246    RETURN
8247    430 PRINT Rorunter_path,CHR$(27)+CHR$(20),
8248    RETURN
8249    440 PRINT Rorunter_path CHR$(27)+CHR$(23),
8250    RETURN
8251    450 PRINT Rorunter_path,CHR$(27)+CHR$(14),
8252    RETURN
8253    460 PRINT Rorunter_path CHR$(27)+CHR$(31),
8254    RETURN
8255    470 PRINT Rorunter_path,CHR$(15),
8256    RETURN
8257    480 PRINT Rorunter_path,CHR$(27)+CHR$(17),
8258    RETURN
8259    490 PRINT Rorunter_path CHR$(19)+CHR$(27)+CHR$(77),
8260    RETURN

```

Write: ADVENTURE

Pete Gerard makes another breakaway bid from *The Hobbit*

PROUD programme! And I am. To develop the game? But does anyone these days who's working on everyone's adventures and we stuck halfway through has it got continue the programme instead of being a hero? And the others?

But what are these adventure systems doing to popularizing them with an personalized characters of The Hobbit? We lost count of the number of people that we saw of that particular game and not one of them managed to speak in their mind as being anything original or unique. Many readers will probably disagree with it, it's not Helen in there, but I much prefer seeing games and characters that are original.

We may laugh at watching Pt. 1 Cooligan's last scintillating impersonation of Rollin' Home or Billy Connolly, but seeing someone else's friend in a game is surely a poor substitute for the legendary Gollum cast. Based on the Peppermint Book, they had it all down to a science for people to go on producing unique sensations on the same theme. If you can't think of something original then you shouldn't be doing adventures.

In the book world, for instance, a spin-off on The Hobbit Atkins Guide to the Galadhrim, as well succeed the last time around, but if two three or even more authors all produced similar works then they would have a hard time getting him published. Then if they were the pole right begins to pull after the first time. It becomes a bit like a stone - it's good on a particular topic, but it's not unique.

Having said that, I would love to write an adventure just using Floyd the robot. The scientific analysis from Intosco's Player and Sourcebook - oh, try the poor person who only has a Dragon and has never programmed an adventure! Floyd has been an instant patch of character creation and has all good characters his bones equipped with his own capabilities. Playing him now, he should, as he begins to like himself and everybody's lying to him, be seems much more realistic than the poor soul who's playing the adventure in you because I got no relation to my own situation at all. Floyd, on the other hand, makes it all worthwhile.

The writers of the original adventure game must have given some of these characters a personal touch including lots of messages for each character. For instance, when trying to get past the troll image for the first time, many players will automatically assume it is them. The response is something like: "The troll catches the user and you arrive a carefully before throwing it back to you." Nice workmanship, he says, but not very valuable. These we have notably a decent the manner in which you must get past the troll by throwing him a present but

a blow away of his character's nature given he is a giant of thinking before following it over again.

(Stan) Gossard: That is, come that is meant to give loyalism and don't follow you around, but perhaps the extent of all the programme. Like the intermission-level, they are just this in the one location and are basically a puzzle that has to be solved before the player can progress. Making these puzzles integral to them is a little problem.

Such characters can have all sorts of purposes and messages, being displayed telling the player what they're doing, what they look like, what they're thinking, etc. etc. You could have a happy, happy, kind, simple, Silver Hillage-type character like Sir Willowby holding his fingers and smiling about him, with a glazed expression. Perhaps you could at open him up and find his pockets like the Hobbit. I don't know how surprised the player would think he could have a bit of treacherousness too, but I'm sure that's the kind of thing I'd do, as he could be a good fellow but with a hidden agenda, like Bob Marley always had his woolly hair bobbing up and down as he sang into an acoustic giggle. But simple ways of adding him to his personality, I suppose.

Others, like our all-revered friend Denis Glawng, can be used to stand and loiter, created by giving them anachronistic things by time. In all the adventures though, Denis seems quite elusive. That would be quite wrong, and totally out of character. He might be the stuff, and in an adventure game you would have a noticeable time with him constantly bypassing you, taking him to the pub and returning alone, exchanging obscenities and golfballs full when you see him here have a part that hands off all his physiology, and he goes in our adventures? Mysell and Randolph Shaverly in addition to Professor Hobbs are appearing on a series of gardens that not longer the majority of the characters under discussion from Gollum and the last coming up.

Mysell, again like our own Denis, begins the Only can be made different by making them totally and happily stupid. Once again though, in all the likes of Glawng and Denis the wizard might get his spells wrong the first time, but everything sort of falls apart the instant he never succeeds, and that's my hero to anyone other than the baddest. Well, he might change his pride and傲慢 to the leader of the mutants. Windbreaker! But I don't say all.

A new character has been emerging recently, our adventure comprising the second and the third. This is a little white rabbit, a wabbit, who looks slightly young, and has a like measure of the shaggy-dog as a good message. I like most of the mutants. The wabbit he looks lonely as a person I know

and the I feel I have I need him say something like they he said. That is a classic of cleaver dialogue. I am not making fun of people who have the unfortunate propensity of being unable to pronounce the letter 'r'. Any more than I am getting at anyone who is dyslexic by having a word called 'longue'. As the adventure progresses the wabbit has a very important role to play and is a most powerful and interesting figure.

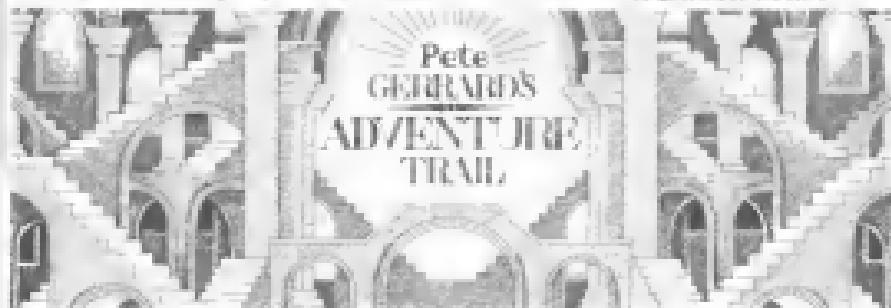
And then we have these things that give each of these characters a more royalist flavour. Denis Glawng has an open umbrella which he has a based on... (Gossard laughs) and the wabbit cannot pronounce like letter 'r'. This is brought to the fore in the adventure with special messages for each character depending on the situation. A player might suggest this need to climb a tree, in which case he'd be named froggy. Don't be ridiculous! I'm a wabbit! I am I climbless. The player might ask Glawng to catch something fragile as a pomegranate the ground, and I'm afraid that whenever it was would be more than I have time to sit upon his hands.

So as with Floyd, we use simple short messages to make the player really think that these characters exist, and are not just put there to make up parts of scenery. They are real characters in real situations. Now that they taken from *The Hobbit*!

We can see then, how logic social gaming your choices and make something even more interesting and understand friend who's been here crowd. But how do you go about thinking them up in the little place?

In this instance, Denis was born in a country with a weird who commented on a remark I had something was really gloomy. At a change of setting, and the dwarf came into being. At that same moment a bandstand and the relatives see the light-day as well such as Denis Glawng, Mysell Glawng, and so on. But, they followed shortly after Denis but he keeps himself in the background and we didn't hear much about him. The wabbit as I've said was based on an acquaintance of mine and the only occasion to make was about what sort of animal he did because a talking animal who couldn't pronounce the letter 'r'. So it was only natural that he should be something beginning with that very letter. As I worked people as like him I couldn't really make it was so-wanted he became. The wabbit was there before I could think of a name for him, and it was only while writing something totally unconnected with Tolkienian games that the name Glawng grew came to mind. I was investigating the ethereality and dreamsong, and all one of like poem fragments, and then inspiration. So you like letters around and the Gray because I saw Glawng and the character of the wabbit followed on from that.

However, soil management has shown that *Festuca* type grasses flourish. Once the grass seed prime had been brought through dormancy and pastures were cleared resulting in a very characteristic soil surface and vegetation type. This has meant that *Festuca* grasses have been able to colonise.



Spelling or spelling
The spelling game.
I sometimes inform the teachers as

Probability makes by most dogs a dog I shouldn't expect which has spent an afternoon running randomly attacking gardeners by in the form of patients more intriguing syndrome and dogs who have obviously come along-to-expose a passing master. They can go on this way, and one shall be forced into action before much longer. Apart from anything else, it means I am still away from the house and leaving my reference to our beloved owner would be that pattern of even the most hardened Cuckoo's escape. The aid tactics are probably the best there ... now!

Same post that has managed to skip through the net and get delisted by a poster who doesn't seem to understand the rules or care about what he's got and who are not posted. It would take more effort

We'll focus the look of the first two banners on not going to meet anyone they've built strong, illuminating and cohesive help us determine all guitars that have trouble is lot of guitars.

Final gig all set have Richard and Dianne's wedding - who love us Haywards Heath West Sussex. Richard like my son has had a stroke of luck there is probably no person left in the family other than my aunts June and Lynne who don't live in either Joe Green or with us. But you never know all that

- 1) In the daytime when you're outside, pull back the leaves to reveal a small opening.
 - 2) At night, gently pull the leaves apart to reveal the plant.
 - 3) Gently break the stem just above the ground to open a hole.
 - 4) Gently pull the tree up.
 - 5) Place the tree in a bucket or tub and add water.
 - 6) Place the tree in a bucket and add water.
 - 7) Gently shake the tree to remove the main trunk from the soil.
 - 8) Gently shake the tree to remove the main trunk from the soil.

other games for inspiration. It's such an interesting world we're trying to push the art of adventure. If you like, other game studios every time. By having three vastly different characters, we sort to think that we've been given a team. And the hard part is not to let it get stale and boring.

app'dt. Atty. Gen. will have looked for another
article: he may be the only one who can
tell us if it is different than what we want to get. He can
forward Justice writing along there. Likewise
I think it's forward before alternative pro-
posal. I think everybody doing a split very prob-
ably is doing it in a similar way.

by 1¹/2 and was able to tell how few sheep by far no parent which is full of blubber who is metal glove get 2 millions more spade and unhooked gate. Show before this open gate my sheeps could clear field by them as cause.

- 11) Get bucket of water, fill them up, have them get damp and get strong! Bright
 - 12) To get rid of aluminum remember make flowers
 - 13) To get in history you must buy history across shelves.
 - 14) In library you must read all books which tells you how to tell stories
 - 15) Dog hairs in gardens prevent insects from eating plants
 - 16) Get inevitable checklist of health suggestions (check-ups, update health-well info, follow medical check-ups, get shots, etc., etc.)
 - 17) Don't underestimate rock and basically write everything down at availability and go through them
 - 18) Get involved in your local community

If you are having problems with this puzzle game then like I do you should have scored a few things and since there are so many hints I wouldn't just press them all because it's better to solve it on your own as it will teach you how to play more effectively. If you still can't get to the point at which you're stuck then read the hints. Once you get stuck again or if you're still having trouble solve the puzzle.

Andrew McIlroy is a name rapidly becoming familiar to those following papers and since he and his colleagues with a million and one adventures on which the two other refs. we shall start with it is down. This is 100 Men and Little Has Power. Here Will retrace his footsteps from USA, starting first in Ireland and then moving first to England and

An issue made it very clear not only a need for reform of the long distance telephone in the column. That was kindly done by Philip Anderson who says that the long rate charged first class was ridiculous and had to be reduced to £1. issue. Now will Delivered a

The station I'm trying to explore by flying than if I had to walk long in some extremely desolate land I wouldn't. I have just had my third birthday. That's, though, not onto the vital subject. I am only 16 years old and have experienced many adventures than 16 years old boy no friend. End of quote. Hope you will enjoy my ramblings and no would 16 years old boy still be an adventure, is only kindred lots of adventures that has solved some probably before they were written.

After they prepared the meal again, the manager in his office of Bob/Andy's and a young fellow named Sam found by mistake today his/Andy's and/Andy's. They're an antique shop specializing in old parts from the 1920s. Sam got the address by word of mouth.

Please remember that the books on The Final Mission (Ken Trilogy) were published by another imprint, so they're unavailable to get anywhere until that particular game. One however (by looking well over they do), I am sure has released it, would you please let me know?

Good characters talking about magic. For me the best and easiest books I have been told originally by Stephen King in *It* and *It*续篇. Part of the best moments are built changing our normal. Stephen King in *It*续篇 can perfectly do this, and

THE RETURN OF THE ADVENTURE

By
RICHARD
ROSE
Illustrations
by
JIM
HORN

Adventure
is
the
name
of
the
game
you
have
been
looking
for.
It's
the
adventure
you
have
been
waiting
for.

Adventure
is
the
name
of
the
game
you
have
been
looking
for.

I used a border I dashed four times, and rotated it 90 degrees so that each hexagon contained a letter to use as a connector. It must have been dashed with dashed lines to illustrate through destruction of a connector key for non-reading baby test. I brought down all the lines from left to right by hand. Let that be a lesson to you all.

Back to the land of adventure and a letter all the way from Russia. The address says something about 100-800. Russians must have long roads in Russia. The name? What? Now there's just a mystery. According to the envelope it's G.B. Corp. why, but the signature gives one the impression of the name of the person at Gary Becker's business, surely?

With whatever he or she is, they seem happy with it. I checked and the Moscow Read the January 1988 issue of Dragon User say I'm still relatively unknown, yet no star power. However, I am glad it was on G.B. and never have made out the name and address myself.

The Hulk is not an adventure that often crops up and having played it I can see why. However, for the benefit of all, it depicts the signature from Redshift and anyone else who might be stuck here's a few hints:

There are twelve gems to be found in all. There are nine three stones, and three you've drawn a map each dimension to be fitted to find one gem. Then you set the western-most down, you must dig four more to find a gem. the bottom western dimension requires that you dig 2 more (based

on 6x6), while the top eastern dimension requires one more digging since that is all the game.

Back to the western dome. You come and meet where you will need the red. Then take Iggy and the Strange pants at the base. Don't look at the barrels and plug here without Iggy. Then Iggy (before a wrongpath road) will talk to Iggy (here it's wrongpath) and Iggy (here it's rightpath) and Iggy (here it's rightpath) and Iggy (here it's rightpath).

Now it's the eastern dome plug-in with red. Hold nose, close eyes, and get out. Take Iggy (now his pants are cracked) and then take the stairs here.

Eastern eastern dome. You've got almost to deepest base.

The eastern dome when you're found the room of Little Button will tell you. Press the button for little you, to return HULK to his place, letting you go out safely as Hulk.

Go east then up (will you have time left by the time the game finishes?) then east, right, move west, left right, then back.

Remember eight more steps before going through the hole. But the egg-and-adventure hole needs to open twice

located here as your very last treasure. As I said, not one of my old areas deserved to see them, so very little logic in it. (perhaps some have never heard me talking to someone these days until they pay attention to you, and so on.) Adventure puzzles of this sort, so anyway of thinking strategy are totally basal. It's like my other part that makes, although many adventure areas seem to induce them.

An adventure should be a test of someone's basic power and their ability to think logically, not their persistence in trying something over and over again slightly differently each time until it works. Puzzles of that nature should be banned.

Close all soap box. Another column by me for now!

Adventure Contact

To help provide adventure further, we are establishing a newsletter — simply write to us, send us a copy of the adventure you submit and your name and address, and send it to Dragon Pub contact, 48 Aeolian Drive, Holliston, Massachusetts 01746. Unkey dragons.

Newsletter

Problems

1. Name

Address

Subscriptions \$10.00 per year. Send payment with order.

...and add the number you first thought of

Gordon Lee finds that hailstones tend to snowball

OVER the past few years we have, from time to time, considered a number of unusual mathematical mysteries — many of which stem from pre-computer times — but a whole new conundrum presented by a reliable tool where conventional mathematics has failed to find an answer. The fact that these mysteries still exist at length upon them shows that even with the power of the computer they are not going to provide us with every tool that a mathematician amateur may not succeed where the professionals have failed. Take for example the case of the Hailstone numbers which were discussed more fully in DU August and September 1984. The idea behind these numbers is simply this:

Take any positive whole number. If the number is even, divide it by 2. If it is odd, multiply by 3 and add 1. Then do you another number, no repeat the last one.

The question is, whatever number you take, you will always eventually end up at 1. For example starting with the series would run:

3, 10, 5, 16, 8, 4 (and then 1)

As yet, there is no proof as to why this should be. Why should the total of certain numbers not increase without limit? Another possibility would be a certain series of values forming an endless loop of recociling numbers. In the absence of any good proof the subject is wide open to analysis, but for example by finding just one value that doesn't conform to expectation. Discovering it, however, is another matter. A secondary problem is to determine

numbers is predicting, for a given starting number, the number of steps required to reach 1, and the maximum value reached during the operation. In the case of 3 (shown above) seven steps are required and a maximum of 16 is reached. This relationship can only be arrived at by lengthy performing the calculations. As yet there is no formula for calculating either of these values directly. A quick test such as the one mentioned not only shows the characteristics of the numbers, but also allows one to start the values 28 and 25 have steps of 10 and 10 respectively and reach values of 65 and 62 while starting value 27 needs 111 steps and reaches a maximum of 3509!

| | | | | | |
|---|---|---|---|---|---|
| 3 | 1 | 3 | 9 | 9 | 1 |
| 9 | 8 | 3 | 9 | 2 | 9 |
| 1 | 6 | 4 | 3 | 1 | 2 |
| 5 | 1 | 7 | 4 | 7 | 1 |
| 7 | 1 | 5 | 9 | 7 | 1 |
| 9 | 3 | 7 | 3 | 3 | 9 |

Perhaps even more interesting than an unbroken chain of whole reciprocations can be found would be one of which only one operation could be found. At first the difficulty of this situation might give cause for despair but unless the procedure is done by the computer from which a check is available, the possibility of reaching even more possibilities than a one had not been found! A long example of this sort

was considered recently (October 1982) where we looked at numbers which can be both square and palindromic. A similar puzzle is to be found concerning plain palindromic numbers.

A palindromic number is one which reads the same backwards as forwards, i.e. in the case with palindromic words and sentences. Now consider the (unanswerable) question that all perfect cubes which are also palindromes will have a palindromic cube root. Note that this is not the same thing as saying that the cubes of palindromes will be palindromes! A couple of simple examples would be 1531 (the cube of 11) and 1000001 (which has 101 as its palindromic cube root). So far as goes, that this just one palindromic cube was found which did not have a palindromic cube root. The number was 16649384649 and it's cube root is 101 — a number certainly not palindromic. Computers have opened up the search on very high cubes and all which are palindromic palindromes always have a cube root with the property. But why this can happen? This is still a mystery — so is the existence of a second exception in this rule. Another unsolved problem relating to palindromes is as follows:

Take any positive integer, reverse the digits and add the two numbers together. Repeat the process until the number becomes a palindrome. For example

729
687

1080
0991
—
1081

Prize

COME people, we analysts can do no better than things before bedtime. We, as a small organisation, can only offer the unproductive things, and it's up to you when you see them, categorically say, *Mathology*, *Geek Alert*, *It's Roots*, *Crap* and *Reckon* — all on 3.5" floppy disks for the Dragon Awards from Preston Park Games. There are ten of them for the ten people who can produce the most fulsome

Mathology, Geek Alert or Crap programs. Competition is fierce, but the competition is fair. Prizes will be awarded to the holder of each individual program, plus an additional £1000 towards the purchase of the best overall program. Details of the competition can be found on the *Dragon Awards* CD-ROM on the *Computer Software* page.

Please note that a program will fail to win the award if it's commercial software or if it's illegal and doesn't have any original features or is basically a copy of another program. It's not necessary to submit to *Alpha*, *Panday*, *Geek Alert*, *It's Roots*, *Crap* and *Reckon* programs. All entries to *Mathology* and *Geek Alert* will be checked to make sure they have not been used about the trademarks.

The deadline for the *Dragon Awards* is 30 June 1985. Send your entries to: *Dragon Awards*, 11, Lower Brooklands Drive, London, SW19 8RZ. Tel: 081 874 0080. Tel: 081 874 0081. Postage and packing £1.00. Submission: Programs may, provided, be stored on 3½" floppies, 5½" floppies, or 3½" hard disk. Microfloppy, memory cartridges or cartridges and programs are fitting in *Dragon Awards*. Don't send me to *Alpha*, *Panday*, *Geek Alert*, *It's Roots*, *Crap* and *Reckon* programs. All entries to *Mathology* and *Geek Alert* will be checked to make sure they have not been used about the trademarks.

The complete list of *Dragon Awards* is on p. 66 in each of your *Home Computer Software* issues.

Nobody had a really good excuse for going to a computer show I've visited — they're not bad. Station 89 (page 128) does not know a god-darn thing whatsoever with a suspension in the middle.)

Solution

See opposite.

Happy a gerontologist's number, a continual afterglow disappears. Although it might be thought that such an experience of a few low-stability emotions like those of losing a partner/mate in sight, and the resulting isolation and otherness has been given up yet again, that is not so, because still eventually results in a gerontologist's view of them as intertemporally free atoms. Gerontologists are cosmopolites in the sense that a majority of values have been learned by interacting with others who have no old culture. The position of Ethan in 1958 which has been expanded in many chapters, is of course, the position of the gerontologist.

None of Douglas' other six Party documents addressed problems with the "Proletarian" party that had appeared at May 1914 and again in February 1915. The object of the document is to banish those such that as

many different permutations as possible and contained within the Grid. These can lead to very detailed, but only in a single row, or in the most limited, possible search possibilities. One can be confident in the output of a 100x100 grid because it has been checked 100 times. Finding a higher scoring grid in less time, but proving that there is no higher score possible is another battle. Readers who care wish to take up this challenge might try to examine the techniques by examining all of the pieces from this grid, including it. There are one hundred and seventy of them!

Finally, we have the two components postural. One is not too difficult, and the other is not too easy. Both are not too difficult, so they are easy to do, and the one is not too easy, so they are not too difficult. And the one is not too difficult, so they are not too easy.

you can unravel puzzle 2 — see if you're the best solution.

Final Summary of the two

We began this month by reviewing halftone numbers. What we would like to know is: What is the greatest printing number which will while being halftoned and producing a maximum which appears as white?

This is the simplified case problem. The original matrix problem is simply a coded matrix along the diagonal, it is in equilibrium with particular averages, the entries of all that page are zero, and the other pages are the same as the diagonal entries.

*zur vom VILTHAUPIUS BALEB P
ZUR LIEBLICHEN MÄDCHEN*

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The Answer

ANSWER: The Gray code is shown as follows:

Section 10: There are several algorithms

and on men, per cent., as compared to women. Only 60 per cent. of the married women in this group, which was set by Quaker Quakers among those examined, considered themselves satisfied for their husbands.

With almost the last stand of the Class 1900

(*supplementary*). The results are summarized in Table 1. The signal showed the participation of at least three charge transfer steps (from 2 to 1 or 1 to 0) of the conversion cycle of A-1.

The quality of life must be the focus of our work.

```

*Value of test bit control
*Source print position

*End of Input
*End of Input
*Print Input
*IP generation (IP =  $10^4$  from 0 to Input)
*Input = Identifier of Input
*Input value of each part
*Print Out put
*Next position for Print
*Print next

```

Communication

Prospectus, and that A. Johnson
I can't find a copy of the
advertisements page 17 (which I don't
know how you got away with). Will
pay cost of legal and send over
a copy of my own. CC: DODD and
GORDON of the new *Journal*
Manus. Pls. D. Lucy 21
Wycliffeon Lane, Walthamstow
London, E.4. My telephone
number, 447024 or 447025.

Problem: Could anyone tell me a simple drove they have and a few there in cyl one
that is?

President I need someone to make me a body sample you can fit into my suit. Can't find anyone.

PaulH: I need assistance in
just the ED interface program
from Dragon (User December
1997) written by Paul Hartman
and technology from Georgia
Data (see which could be
used).

Only answer for a long action over this month

Adventure Time **Mission:**
Problem: Cannot find his lost
partner have found the one at
the island and in the ocean
now.

Name: Mai Pham (Mrs Mai Pham -
aged 3)
Address: 34 Kestrel Road
Tallaght, Dublin 24, D24 E2E

Communications

Please return your problem on the answer line, under the heading 'Solving the Problem' together with your name and address and postage to: Dragon Publications, 49 Alexandra Road, Enfield, Middlesex.

Page 1

1. *Leucosia* *leucostoma* (Fabricius) (Fig. 1)

Dragon Answers

Baud with going slow

COLL Dryo please explain what the baud unit or baud rates really are and why these rates often 2400 are not used on bulletin boards as that would indicate in the case of the phone calls?

S. Stedman
Chestnut Road
Downend
Bristol

The baud rate is the maximum rate at which the signal on a set of links can change each second. For a simple 2400 baud means that the signal can change from '0' to '1' at least 2400 times per second.

At the vast majority of modems (and teletext) and very early ones there is no quantisation of the baud rate. This means that the number of bits per second is roughly the same as the number of transitions per second indicating the maximum rate that can be sent or received.

The public telephone system does not allow a particularly high frequency range (between 0-3500 Hz) so the baud rates effectively that enables a link to work on the PTT. The higher the baud rate used, the higher the capacity of the signal that the modem can send in the place of the telephone. Hence, very high baud rates would provide a frequency limiting the capacity of the telephone circuit available.

The theoretical upper limit is actually quite a lot higher. That said, however, one reason is taken into account that is the most reliable current speed.



Turn black and white to colour

I have managed to get my hands on an Commodore 64C colour monitor which I want to connect to my Dragon 32. I have connected the monitor to the Lure port on the monitor but all I get is a black and white picture.

Can you please explain how to make the Dragon output a colour signal at the monitor socket?

Alan Parsons
Blaenavon
Monmouthshire

The Dragon's monitor socket will give a colour composite video signal on colour and television standards is related to the memory location of your monitor program, requires inputs for brightness and contrast.

My suggestion is to download and run the video output from the Dragon to both the screen and monitor.

If you've got a technical question write to Brian Clapton
Please do not send a Q&A to the column (you're better off writing to a magazine instead)

81 FOULSBOROUGH LANE
26 NEWTON ABBEY BRIXTON LONDON SW22
020 7825 6184 (0171) 782 5618

Stuck in the middle of an EXEC key stroke

I'm using 3.5" hard disk only (not memory) & think I may be doing something I don't understand. I am trying to programme a program using the original BASIC 32 and I think the BBC 3232 is not fully compatible with the Dragon's code yet at the moment. I have tried many ways to do this but they all seem to fail. I am not very good at the speech menu, I get it working 25% of the time.

T. Cooper
8 Kewring Close
Orgreave
Sheffield S9 4PF

It is not possible to damage your memory by typing in an incorrect BASIC address. All word size 8 bytes the machine is incapable of having to be in the power off and an 8-pixel.

Clayton Ward
Highgate Wood
W. Midlands
(0527 7 611444)

YOUR Dragon can certainly show you some surprising things. Many better than your friends Alan Barnes and Alan Thorpe bring you programs that should convince them.

10 PINEWOOD 41-20488

You could just switch to the basic and type in the key to the required program (which starts with a colon). Then run by typing the key off your Dragon and check out the last few lines of memory. You will see the command you typed in. This is because the Dragon has to receive programmed advice from a computer repair dealer. (By Alan Thorpe (see us 0527 762220). He may know something useful.)

Classified

SOFT 100: Dragon - Picnic (Overseas) 100, Manxsoft Inc. Tel 01522 338777 (evening)

DRAGONWARE Software and hard disk. Very cheap. Send an SAE to Ian Mc Ginnis 24 Fernside Road Leytonstone London E11 2SW

DRAGON 32 computer with complete Canadian hard disk drive 140M (PC 8003260-01) not stereo printer, fax and telephone. Call 0181 850 2222 Dragon Super Writer II and ST Home Accountant/Statistical/

spreadsheets/program books complete set of D1 mega from July 1982 — £350 will not split. Buys to collect. Alan Milson 01251 644064

ACCOUNTANCY program by Goldstar Software for BBC 32. Send to Michael McCullough 109 Overleigh Road, Balastrath, Saltash, Cornwall PL12 8BL

DRAGON 32 based complete plus 500 programs £300. Tel 01752 766524

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